



VERITAS NetBackup™
Microsoft Windows
User's Guide
Release 3.2

Windows NT/95/98

May, 1999

P/N 100-001004

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Preface

This manual describes how to use NetBackup to back up and restore folders and files that reside on a Microsoft Windows PC.

For specific information about the NetBackup Server software, refer to:

- *NetBackup Release Notes - UNIX*, if you have a UNIX server,
or
- *NetBackup Release Notes - Windows NT Server* if you have a Windows NT server.



Organization

This guide is intended primarily for administrators and users of Microsoft Windows PCs that are NetBackup clients. The guide will also be useful to system administrators of the NetBackup master server. It is arranged as follows:

- Chapter 1, “Introduction” provides an overview of NetBackup, describes how the end user operates NetBackup, and describes technical terms and concepts. Read this chapter to become familiar with the world of NetBackup.
- Chapter 2, “User Directed Operations” explains how to use NetBackup to perform backup, archive, and restore operations.
- Chapter 3, “Reference” describes the various windows, screens, and menus associated with NetBackup.
- Appendix A, “System Administrator” contains information important to the NetBackup system administrator.
- Appendix B, “NetBackup Commands” is a detailed listing of commands available for use on the NetBackup client.



Related Documents Books

The following documents provide related information. For a more detailed listing of NetBackup documents, refer to *NetBackup Release Notes - UNIX* or *NetBackup Release Notes - Windows NT Server*.

If you have a UNIX server, refer to these documents:

- *NetBackup Release Notes - UNIX*

Provides important information about UNIX NetBackup server software, such as the platforms and operating systems that are supported and operating notes that may not be in the manuals or the online help.

- *NetBackup System Administrator's Guide - UNIX*

Explains how to configure and manage NetBackup on a UNIX system.

- *Media Manager System Administrator's Guide - UNIX*

Explains how to configure and manage the storage devices and media on UNIX NetBackup servers. Media Manager is part of NetBackup.

- *NetBackup Troubleshooting Guide - UNIX*

Provides troubleshooting information for UNIX based NetBackup products.

If you have a Windows NT server, refer to these documents:

- *NetBackup Release Notes - Windows NT Server*

Provides important information about Windows NT NetBackup server software, such as the platforms and operating systems that are supported and operating notes that may not be in the manuals or the online help.

- *NetBackup System Administrator's Guide - Windows NT Server*

Explains how to configure and manage NetBackup on a Windows NT server system.

- *Media Manager System Administrator's Guide - Windows NT Server*

Explains how to configure and manage the storage devices and media on Windows NT NetBackup servers. Media Manager is part of NetBackup.

- *NetBackup Troubleshooting Guide - Windows NT Server*

Provides troubleshooting information for Windows NT based NetBackup products.



Conventions

The following explains typographical and other conventions used in this guide.

Type Style

The following table describes the typographic conventions used in this guide.

Typeface	Usage	Examples
<code>courier</code>	Computer output; user input; names of commands, files, and directories	You have mail. The <code>mkdir</code> command creates a new directory. <code>mkdir new</code>
<i>italics</i>	New terms; document titles; words to be emphasized; variables to be substituted with a real name or value	<code>mkdir filename</code> Refer to the <i>User's Guide</i> for details.
bold	Glossary terms	

Notes and Cautions

Note: This is a Note and is used to call attention to information that makes it easier to use the product or helps you to avoid problems.

CAUTION! This is a Caution and is used to warn you about situations that can cause data loss.

Keyboard Sequences

Some keyboard command sequences use two or more keys at the same time. For example, you may have to hold down the Ctrl key before you press another key. When this type of command is referenced, the keys are connected by hyphens. For example, Ctrl-t.



Command Usage

The following conventions are frequently used in the synopsis of command usage.

brackets []

The enclosed command line component is optional.

Vertical bar or pipe (|)

Separates optional arguments from which the user can choose. For example, when a command has the following format:

`command [arg1 | arg2]`

the user can use either *arg1* or *arg2*.

Getting Help

For license information or information about VERITAS service packages, contact VERITAS Customer Support.

US Customers: 1-800-342-0652

International Customers: +1 (650) 335-8555

Fax: (650) 335-8428

VERITAS Customer Support can also be reached through electronic mail at:

`support@veritas.com`



Introduction

1



During installation, the NetBackup Browser is configured to work with a specific NetBackup client. When a user starts an operation using the NetBackup Browser, the browser software sends the appropriate messages to its designated NetBackup client. The software on the NetBackup client then communicates with the server and handles the client side of the operation.

NetBackup client software enables server directed backup, archive, and restore operations on entire folders or individual files that reside on your NetBackup client. This software also allows you to perform user directed backup, archive, and restore operations on your NetBackup client, without logging into the NetBackup master server. Once you start a user directed operation, the NetBackup process runs under the control of the NetBackup master server. You request the service and the NetBackup master server manages the rest, including storage and retrieval of data.

In NetBackup terminology, the system that requires the backup or archive is the NetBackup client. The system that manages the storage and retrieval of the backup data is called the NetBackup master server.

Backup and Archive Operations

A backup saves copies of selected files and folders from a NetBackup client to a storage device on a NetBackup master server or NetBackup slave server.

An archive saves copies of selected files and folders to a storage device on a NetBackup master server or NetBackup slave server, then deletes the original files from the NetBackup client.

User Directed Backups and Archives

You can perform a user directed backup during the time period scheduled by the NetBackup system administrator. NetBackup allows you to select a combination of files, folders with files, or entire drives to back up.

Server Directed Backups and Archives

The NetBackup administrator can schedule full backups and incremental backups that occur automatically and unattended, under control of the NetBackup master server. Full, incremental and true image backups can only be performed by the NetBackup master server. When properly scheduled, the server directed backups will meet most of your backup requirements.

Note: In previous versions of NetBackup for Windows, server directed backups could be only partially successful since some applications retain locks on files when left open. This version of the software is packaged with an OTM (Open File Manager), which resolves this problem. If the OTM is disabled, be sure to shut down all applications on the NetBackup client before proceeding with server directed backups.

Full Backup

When the NetBackup master server is configured to perform a full backup, NetBackup backs up all files in a specified folder or drive to a storage unit. The archive bit is cleared as each file is backed up. If the full backup fails, NetBackup will attempt another full backup at the same time each day until successfully completed. A successfully completed backup will include all files.

Cumulative-Incremental Backup

When the NetBackup master server is configured to perform a cumulative-incremental backup, NetBackup backs up all files that have changed since the last successful *full backup*.

Cumulative incremental backups can be configured to use either the datetime stamp or the archive bit. If the datetime stamp is used, the cumulative-incremental backup includes all files with a datetime stamp that are more recent than the last full backup. If the archive bit is used, the cumulative-incremental backup includes all files that have their archive bit set. Archive bits are not cleared on cumulative-incrementals. Refer to "General Property Sheet" on page 67 for more details on performing incremental backups with archive bits.

Differential-Incremental Backup

When the NetBackup master server is configured to perform a differential-incremental backup, NetBackup backs up all files that have changed since the last successful backup.

Differential incremental backups can be configured to use either the datetime stamp or the archive bit. If the datetime stamp is used, the differential-incremental backup includes all files with a datetime stamp that are more recent than the last backup, full or incremental. If the archive bit is used, the differential-incremental backup includes all files that have their archive bit set. Archive bits are cleared on differential-incrementals if the file is successfully backed up. Refer to "General Property Sheet" on page 67 for more details on performing incremental backups with archive bits.

True Image Backup

A True Image Backup takes place when the True Image Restore Information attribute has been set on the NetBackup master server. When this attribute is set, NetBackup collects additional information necessary to restore a folder to exactly what it was at the time of the full backup or incremental backup.

Only those backups, performed with the True Image Recovery Information attribute set on the NetBackup master server, can be used for the true image restore. For complete details, refer to the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT Server*.

Restore Operations

A restore reads backups from the storage device on the NetBackup master server or the NetBackup slave server and restores them to the NetBackup client. NetBackup allows you to select a combination of files, folders with files, or entire drives to restore.

File Permissions and Open Files

File permissions require write permission on the destination folder in order to restore a file. A file will not be restored when a file with the identical name is open on the NetBackup client.

Access Control Lists

If the access control list to a file on a Windows NT system has changed since the file was backed up, the file will be restored by NetBackup as follows:

- A user that has been granted access to the file since the backup will *not* have access to the file after the restore
- A user that has had access to the file removed since the backup will again have access after the file is restored

If the access control list has changed since the backup, it will be restored to what it was at the time of the backup.

Server Directed Restore

The administrator on the NetBackup master server can direct restores to any NetBackup client (regardless of which NetBackup client the files came from). Refer to the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT Server* for details.

A client can prohibit server directed restores by clearing the Allow Server-Directed Restores: option on the General property sheet.

User Directed Restores

You can start a restore operation at any time. Restored folders and drives include all files that were backed up or archived during a range of backups. NetBackup is also able to perform an alternate-client restore and a true image restore.

Alternate Client Restore

Files or folders, that were backed up or archived from one NetBackup client, can be restored to a different NetBackup client. This is possible only if the NetBackup administrator has configured the NetBackup master server to allow alternate client restores. Refer to the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT Server* for details. Also refer to "NetBackup Restore Options for System Administrators" on page 109 for details on using the NetBackup Browser on the NetBackup server for alternate client restores.

Restore from True Image Backup

A Restore from True Image Backup can be performed only on server directed backups and archives in which the True Image Restore Information attribute has been set. Refer to the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT Server* for details.

A true image restore of a folder, by default, restores the folder so its contents are exactly what they were at the time of the most recent server directed full backup or incremental backup. Files deleted prior to the specified backup are not restored.

During a true image restore of a folder, NetBackup determines which files belong in the folder and then reconstructs it by using the most recent backup of these files.

NetBackup does not allow a true image restore that is based on the time of a user operation. However, NetBackup does use the backups from a user directed operation if they are more recent than the latest server directed full backup or incremental backup.

A true image restore is the best choice if, for example, you have recently cleaned up a folder by deleting unwanted files and now want to restore the latest version without having to repeat your cleanup. It is also possible to restore the true image of an earlier version of a folder.

View Status

You can view, print and delete status reports.

User Directed Operations

2

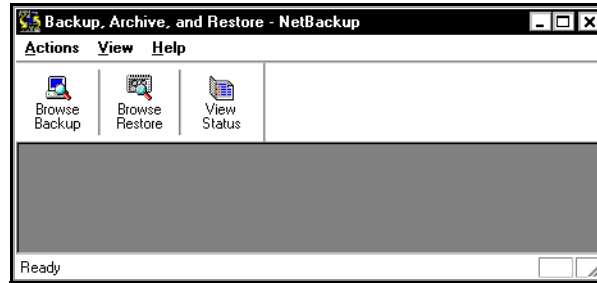


This section provides step-by-step instructions on using the NetBackup Browser to perform backups, archives and restores. For information on scheduled backups and other server directed operations, see the *NetBackup System Administrator's Guide - UNIX* or *NetBackup System Administrator's Guide - Windows NT Server*.

Start the Browser

1. Start the NetBackup Browser.
 - a. Click the Windows Start menu.
 - b. Click Programs, NetBackup, NetBackup - Client.

The Backup, Archive, and Restore - NetBackup window will appear.



▼ Toolbar

For most operations, it is easier to use the buttons on the toolbar. The horizontal toolbar on the Backup, Archive, and Restore - NetBackup window opens windows to browse for backups or restores and to view the progress report of a NetBackup operation.

The NetBackup Backup window or the NetBackup Restore window have a vertical toolbar with buttons for frequently used menu commands. Clicking a button on a toolbar has the same effect as using the menu command. Any action initiated by the buttons on the vertical toolbar only pertains to the window it is associated with.

▼ Helpful Hints

Marking Files and Folders

- Select the folder mark circle to mark a folder and all its files and subfolders for a NetBackup operation. The folder mark circle will appear filled.
- Select the file mark circle to mark a file within a folder, or to mark a sub folder within the folder. The folder mark circle will appear half filled when only some files or subfolders are marked.
- Click Mark Displayed Files from the Edit menu to mark all the files (and folders) that currently appear in the Contents of '<folder>' pane.

Unmarking Files and Folders

- Clear the folder mark circle to unmark a folder and all its files and subfolders for a NetBackup operation. The folder mark circle will appear empty.
- Clear the file mark circle to unmark a file within a folder, or to unmark a sub folder within the folder. The folder mark circle will appear half filled when only some files or subfolders are marked.
- Click Unmark Displayed Files from the Edit menu to unmark all files and folders that currently appear in the Contents of '<folder>' pane of the NetBackup Backup window or NetBackup Restore window.
- Click Unmark All from the Edit menu to unmark all previously marked files and folders. You can also use the Unmark All on the NetBackup Backup window toolbar or the NetBackup Restore window toolbar.

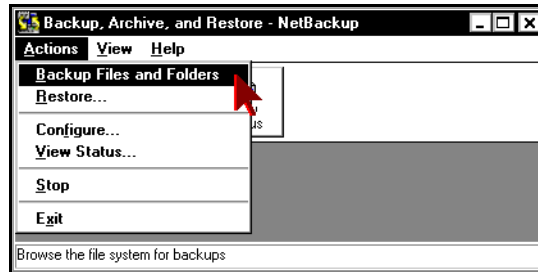
Perform Backups or Archives

This section includes a tutorial. It walks you through a simple backup of the README.TXT file installed in the NetBackup folder.

1. Start NetBackup as described in "Start the Browser" on page 8. The Backup, Archive, and Restore - NetBackup window should appear.
2. Open the NetBackup Backup window.

There are two ways to open the NetBackup Backup window.

- Click Backup Files and Folders on the Actions menu.

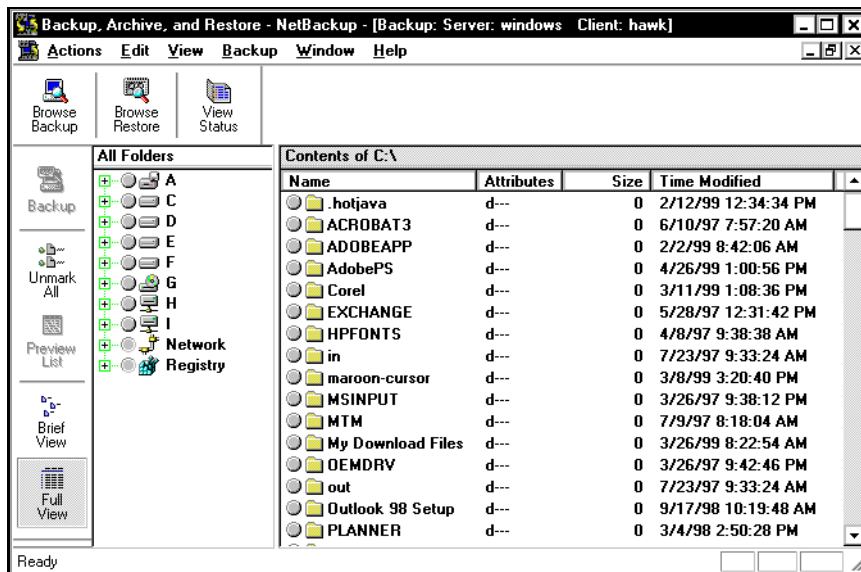


or

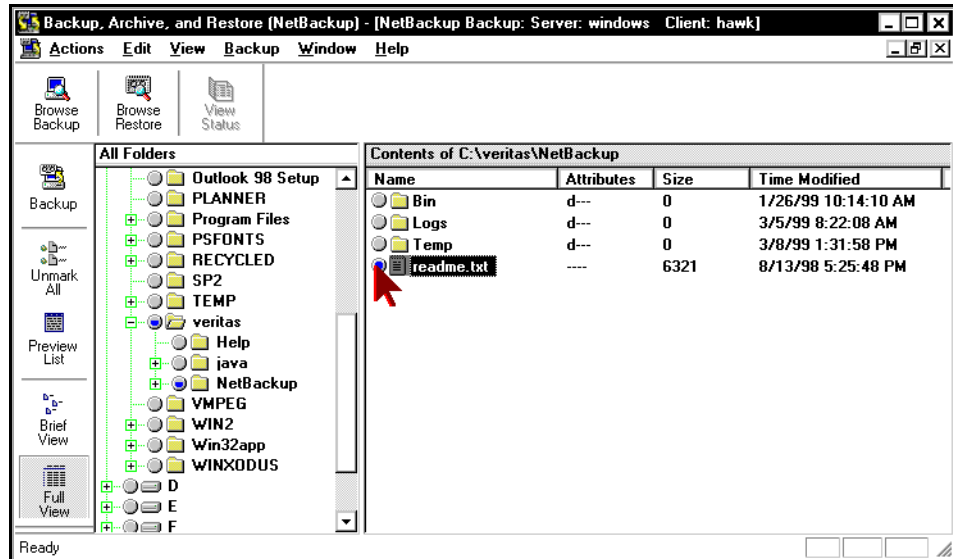
- Click Browse Backup on the Backup, Archive, and Restore - NetBackup window vertical toolbar.



The NetBackup Backup window will appear.



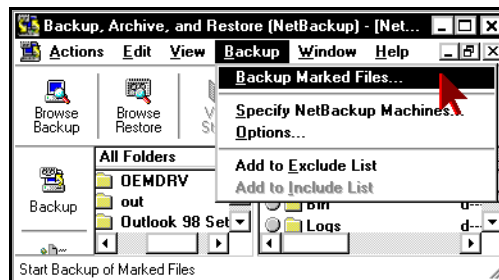
3. Mark a file to backup.
 - a. Open the VERITAS\NetBackup folder.
 - b. Find the README.TXT file and click the mark circle to the left of the item.



4. Start the backup operation.
 - a. Open the Backup Marked Files dialog box.

There are two ways to open the Backup Marked Files dialog box

 - Click Backup Marked Files... on the Backup menu.

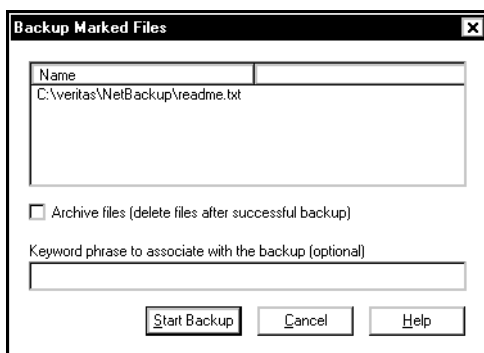


OR

- Click Backup on the NetBackup Backup window vertical toolbar.

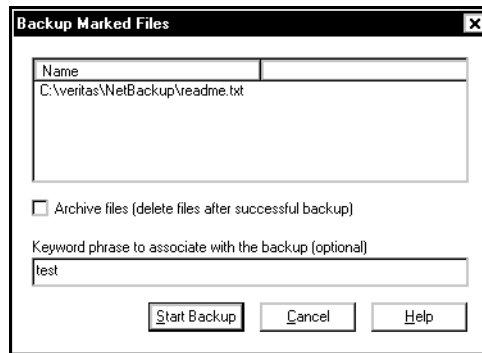


The Backup Marked Files dialog box will appear.



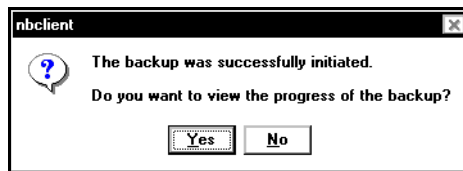
- b. Review your selections in the Name list box.
- If the README.TXT file is not listed, click Cancel.
This will return you to the NetBackup Backup window. Repeat Step 3 on page 8.
 - If the README.TXT file is listed, go to Step 3c.

- c. Enter a keyword in the Keyword Phrase to Associate With the Backup (Optional) box. In this example use `test` as the keyword.

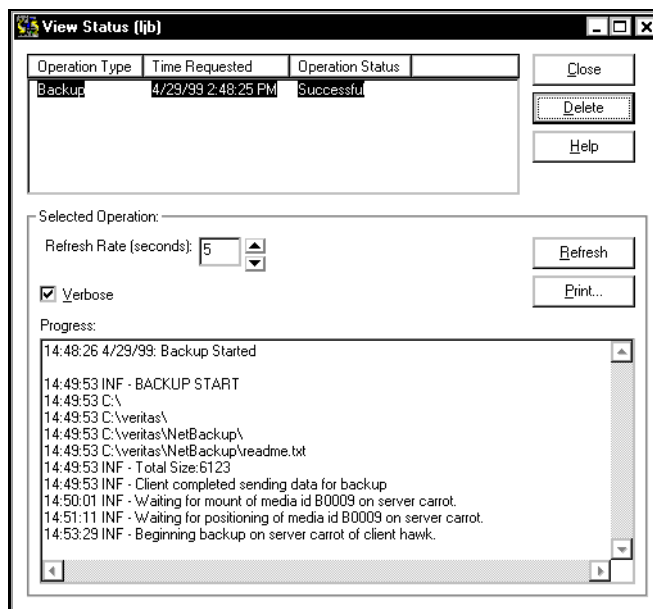


- d. Click Start Backup.

The backup request goes to the NetBackup master server. A NetBackup message will indicate that the backup was successfully started.



- e. Click Yes on the NetBackup Message dialog box to open the View Status dialog box.



The View Status dialog box allows you to view the progress report of a NetBackup operation.

- f. Enter a refresh rate of 10 to update both panes every 10 seconds.

The Progress pane will reflect the progress of the item selected in the top pane. Only the selected item in the top pane is updated. The NetBackup operation is finished when the Operation Status changes to *Successful*.

Note: The NetBackup operation may take a few minutes to complete. You can close the NetBackup Browser after starting a backup operation. NetBackup will continue the backup operation in the background.

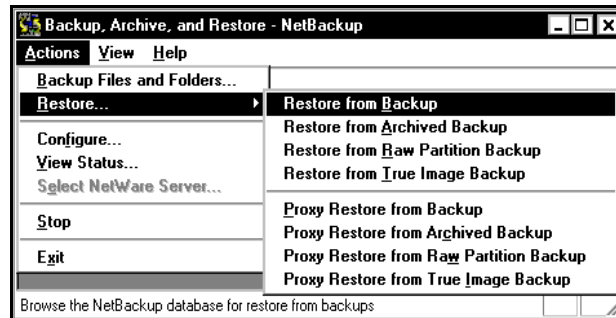
Perform Restores

This section walks you through a simple restore of the README.TXT file backed up in "Perform Backups or Archives" on page 10 of this manual.

1. Start NetBackup as described in "Start the Browser" on page 8 of this tutorial.
2. Open the NetBackup Restore window.

There are two ways to open the NetBackup Restore window.

- Click Restore, then Restore from Backup on the Actions menu.

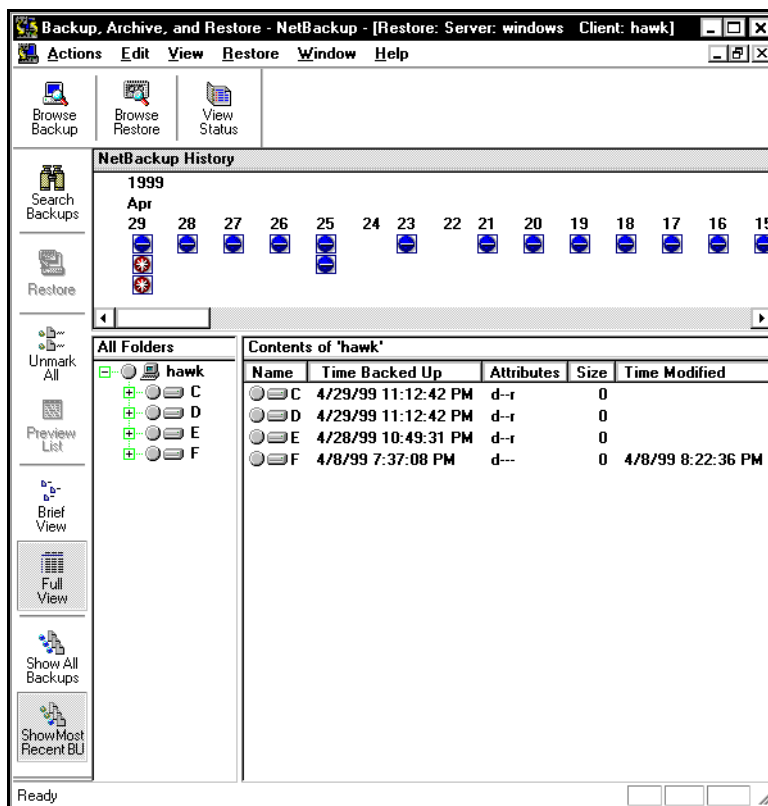


or

- Click Browse Restore on the Backup, Archive, and Restore - NetBackup window vertical toolbar.



The NetBackup Restore window will appear.



There may be a delay before lists appear in the NetBackup Restore window. NetBackup has to obtain the file information from the catalogs on the NetBackup master server.

If files or folders do not appear in the NetBackup Restore window, it can be due to one of the following:

- Perform Default Search: is not enabled on the General property sheet. In this case, start a search manually by clicking Search Backups... on the Restore menu. The Search Backups dialog box will open. Click Search on the dialog box.

An alternate method is to click a backup image.

- The NetBackup server does not have any backups of files for your client. Ensure that the client is connecting to the correct server (see "Servers Property Sheet" on page 71). Also, ensure that you are using the correct client name (see "Clients Property Sheet" on page 73). You can also refer to the title bar. If these settings are correct and you believe there are backups available, contact your system administrator.

3. Select a file to restore.

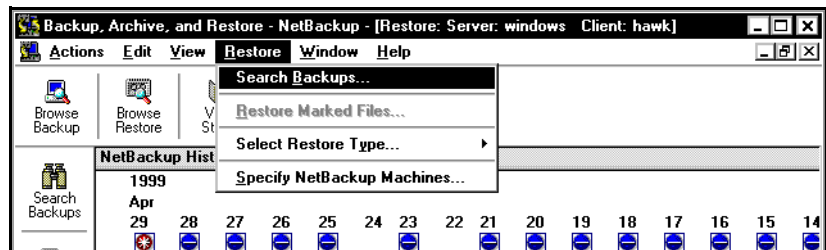
If you know the backup image (or the range of images) you can select it from the NetBackup History pane without going through the Search Backups dialog box.

In this tutorial, we are going to use the Search Backups feature to restore the README.TXT file backed up in the "Perform Backups or Archives" on page 10.

a. Open the Search Backups dialog box.

There are two ways to open the Search Backups dialog box.

- Click Search Backups... on the Restore menu.

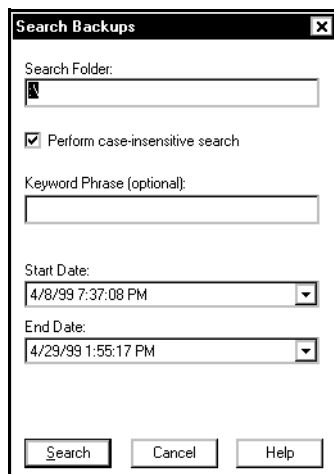


OR

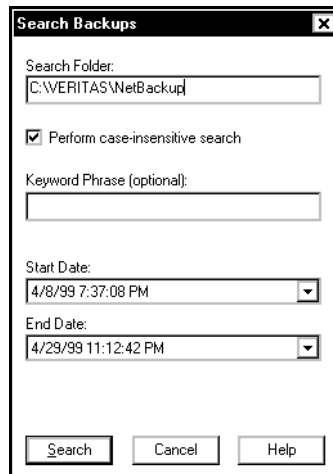
- Click Search Backups on the vertical toolbar.



The Search Backups dialog box will appear.



- b. Type the path to the backed up file in the Search Folder: box. For this example we will enter C:\VERITAS\NetBackup\.



Search Backups [X]

Search Folder:
C:\VERITAS\NetBackup\

☒ Perform case-insensitive search

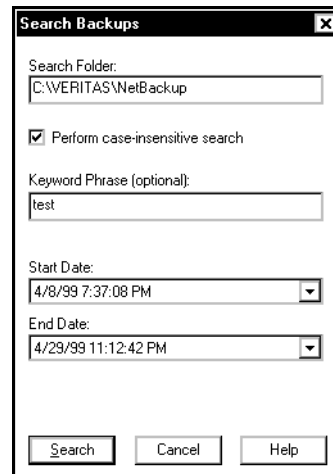
Keyword Phrase (optional):
[Empty field]

Start Date:
4/8/99 7:37:08 PM [v]

End Date:
4/29/99 11:12:42 PM [v]

[Search] [Cancel] [Help]

- c. Type test in the Keyword Phrase (Optional): box.



Search Backups [X]

Search Folder:
C:\VERITAS\NetBackup\

☒ Perform case-insensitive search

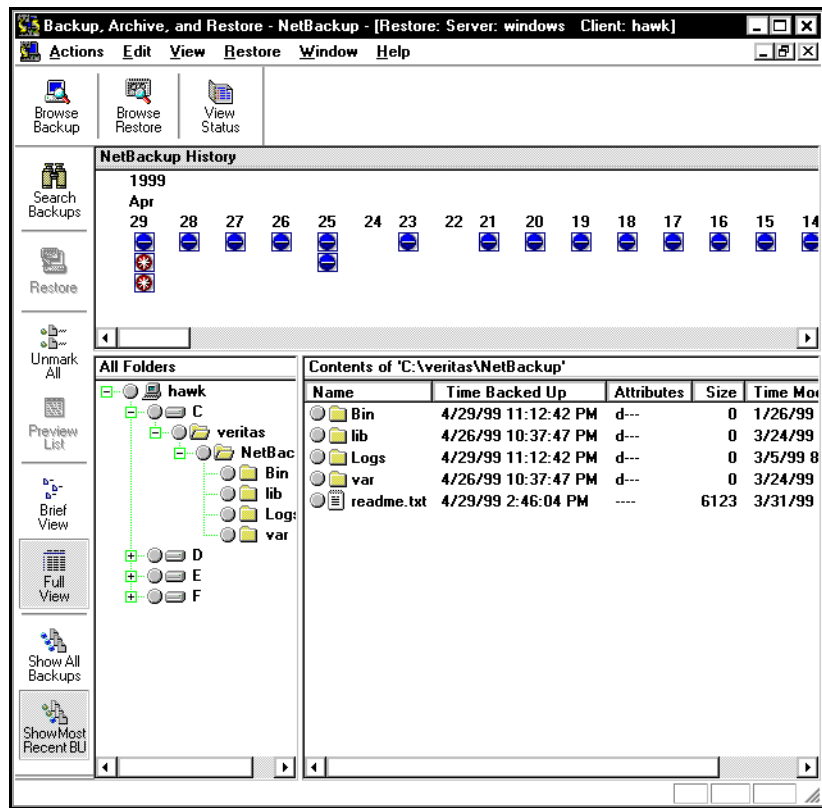
Keyword Phrase (optional):
test

Start Date:
4/8/99 7:37:08 PM [v]

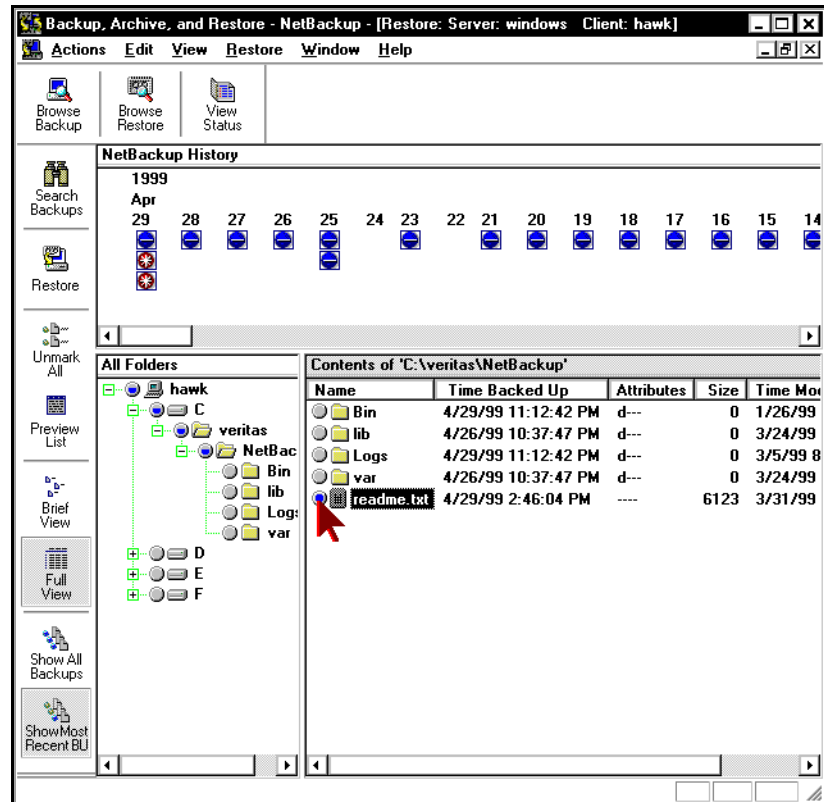
End Date:
4/29/99 11:12:42 PM [v]

[Search] [Cancel] [Help]

- d. Press Search. NetBackup will display the tree to the lowest levels of folders which contain files that were backed up.



- e. Select the mark circle to the left of the README.TXT file.



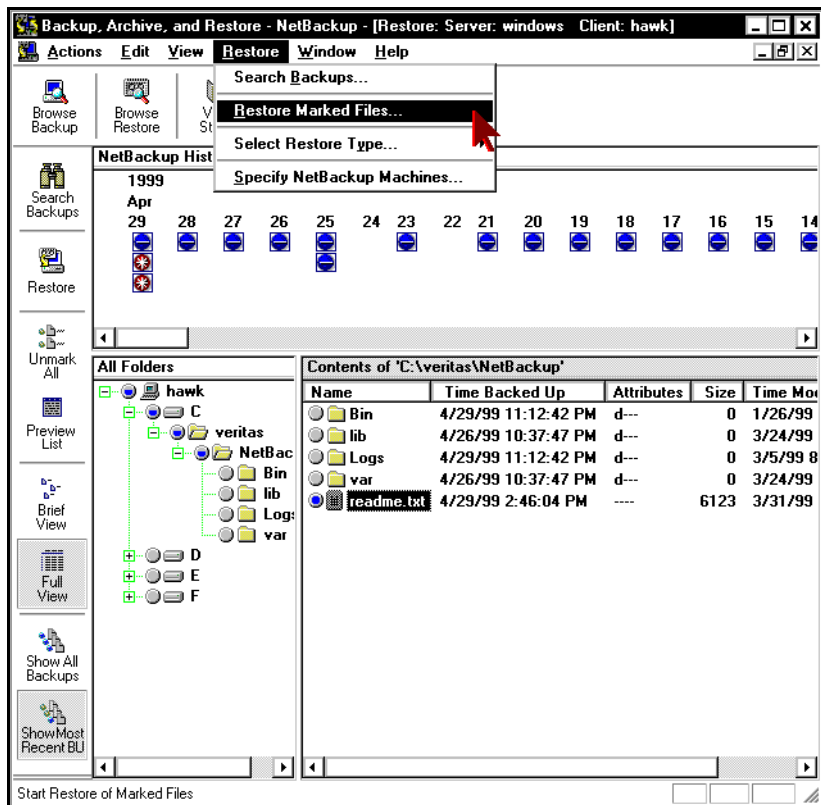
Notice that the mark circles in the All Folders pane are half-filled.

4. Start the restore operation

a. Open the Restore Marked Files dialog box.

There are two ways to open the Restore Marked Files dialog box

- Click Restore Marked Files... on the Restore menu.



OR

- Click Restore from the vertical toolbar.

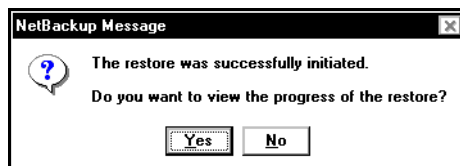


The Restore Marked Files dialog box will open.

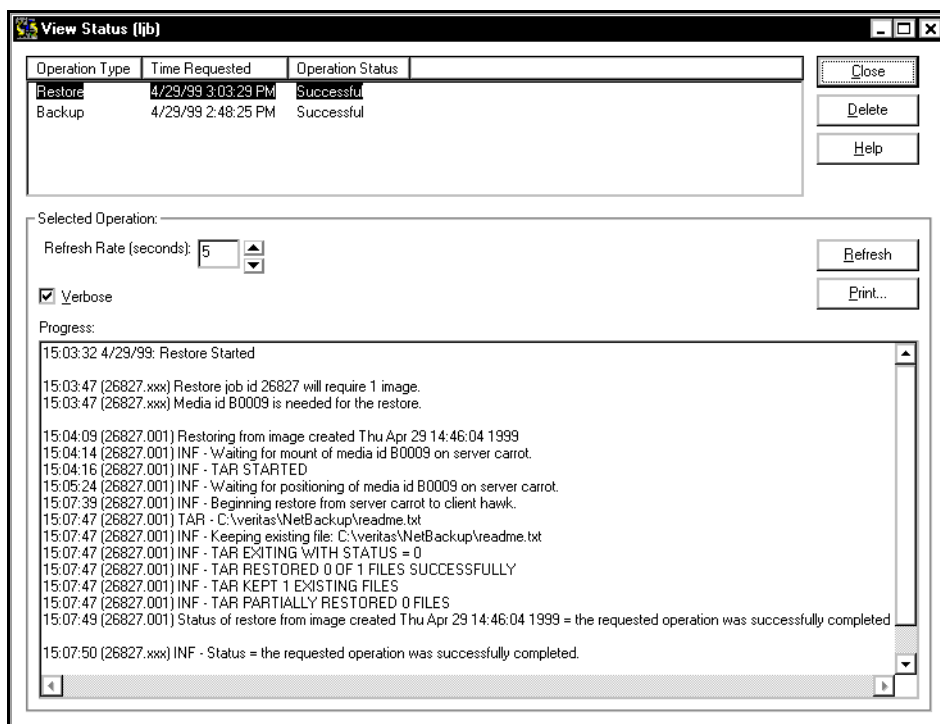


- b. Select the Overwrite Existing Files checkbox.
- c. Click Start Restore to start the restore operation.

A NetBackup message will indicate that the restore was successfully started.



- d. Click Yes on the NetBackup Message box to open the View Status dialog box.



The View Status dialog box allows you to view the progress report of a NetBackup operation.

- e. Enter a refresh rate of 10 to update both panes every 10 seconds.

The Progress pane will reflect the progress of the item selected in the top pane. Only the selected item in the top pane is updated. The NetBackup operation is finished when the Operation Status changes to *Successful*.

Note: The NetBackup operation may take a few minutes to complete. After starting a restore operation, you can close the NetBackup browser and perform other tasks on your computer. NetBackup will continue the restore operation in the background.

View the Status of a User Directed Operation

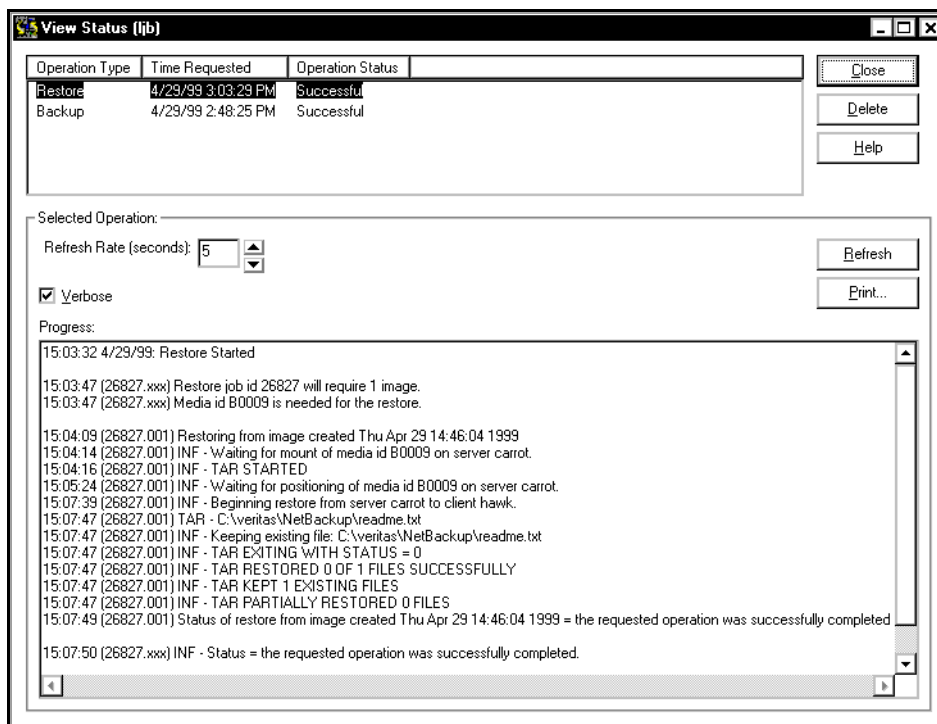
1. Open the View Status dialog box to check the progress report.

There are two ways to open this dialog box.

- Click the View Status button on the toolbar in the Backup, Archive, and Restore - NetBackup window.

or

- Press Alt-a to open the Actions menu and then click View Status....



The status will appear in the top pane under Operation Status. If NetBackup was unable to back up or restore all of the requested files, a status code appears a few lines before the end of the progress report. The *NetBackup Troubleshooting Guide - UNIX* or the *NetBackup Troubleshooting Guide - Windows NT Server* list the meaning of the final status code.

If you require more details on the netbackup operation, follow these instructions.

- a. Select one of the NetBackup operations in the Operations List. The Progress box will display the progress report of the selected operation.
 - b. Click Refresh to update the report.
2. Click Close to return to the previous window.

Advanced Restore Procedures

The following is a detailed explanation of how to perform advanced restores.

Selecting Specific Backup Dates to Restore

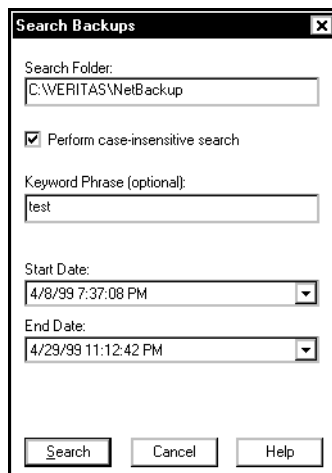
By default, the NetBackup Restore window shows the files and folders that were backed up from the time of the last full backup to the most-recent backup. If the client belongs to more than one ¹class, the default display starts with the last full backup that occurred first. For example, assume that the client belongs to ClassW1 and ClassW2. Full backups occur for both of them-- ClassW1's most recent full backup occurred on Feb. 2 and ClassW2's most recent full occurred on Feb. 10. The display shows files ranging from the time of the ClassW1 full backup on Feb. 2.

The default range will satisfy the majority of your needs to restore files. There will be times, however, when you must restore a file that was not backed up during the default time period. For example, a file that was deleted prior to the last full backup does not appear in the default display. In this case, you must use the NetBackup History pane to select a backup that contains the file.

1. A NetBackup class defines the backup policies for a specific group of one or more clients that have similar backup requirements. The NetBackup system administrator configures the class for your PC.

Search Procedure

1. Open the NetBackup Restore window.
2. Click Show All Backups on the View menu to display all copies of files and folders from all of the backups. Show Most Recent Backup will display the most recent copy of the file or folder.
3. Select the images, from the NetBackup History pane, that you believe contain the files and folders you want to restore.
4. Narrow the search range as much as possible to speed up your search.
 - Select a specific backup image in the NetBackup History pane. Initiate the search by clicking the item.
 - To select a range of backup images, select the first one in the range and then, while holding the Shift key, select the last one in the range. In this case, NetBackup searches all the backup images in the selected range. The range search will start after the second image is selected.
 - Cancel previous selections by selecting another backup.
5. Click Search Backups... from the Restore menu to open the Search Backups dialog box.



6. Enter the search path that you want NetBackup to use in its search for files and folders.

The number of files you can list during a search is limited by the amount of free memory you have on your computer. If you reach the limit, modify the date or file path parameters to narrow the scope of the search.

By default, the search dialog box shows the information for the folder that is currently selected in the All Folders pane of the NetBackup Restore window.

7. Click Search to start the search. When the search is complete, NetBackup updates the NetBackup Restore window.

Restore an Earlier Version of a Folder

Note: This procedure will restore all files that were backed up during the range of backup dates. This includes files that were deleted from your on-line folder after they were backed up. If you do not want the deleted files, refer to "Restoring a True Image of a Folder" on page 34.

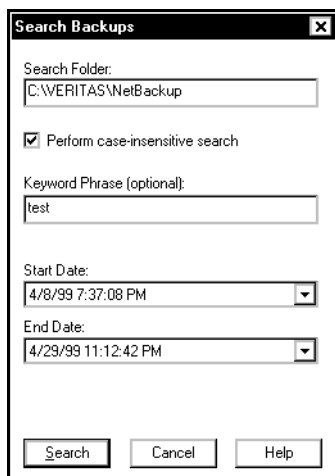
1. Open the NetBackup Restore window.
2. Open the backup NetBackup History pane.
If the NetBackup History pane is not open, click and drag the horizontal splitter bar down.
3. Select backup images from the NetBackup History pane for the dates of the backed up files or folders you want to restore.

NetBackup will search the backup images, and display the contents of the backup images in the All Folders and Contents of '<folder>' panes.

To restore a version of a folder that existed prior to the last full backup, select only the backups that include the desired version of the folder.

To further narrow your search for a specific folder, file or keyword, go to Step a.

- a. Click Search Backups... from the Restore menu to open the Search Backups dialog box.



- b. Enter a filename or keyword.
 - c. Click Search to start the search. When the search is complete, the NetBackup Restore window updates.
4. Select the folder you want to restore from the folder in the All Folders pane of the NetBackup Restore window.
5. Mark the files or folders you need in the Contents of '<folder>' pane. By default, NetBackup restores files and folders to their original location.
6. Click Restore Marked Files... on the Restore menu.

Restoring a True Image of a Folder

You can restore a true image of a folder only if the NetBackup class that is backing up your files and folders is configured to collect true image restore information prior to backup. If in doubt, ask your NetBackup administrator.

1. Open the NetBackup Restore window.

If you get a `No Entity Found` message at this point, notify the administrator. The TIR option on the NetBackup server must be set before you can perform a true image restore. A backup with the TIR option set needs to exist before a TIR restore can happen.

2. Make sure the root folder is selected.
3. In the All Folders pane of the NetBackup Restore (True Image) window, double-click the parent of the folder you want to restore.

The double-click updates the NetBackup Restore (True Image) window to show the folders that are available for true image restores. Notice that the lists show only folders. Individual files do not appear because true image restores are intended only for restoring entire folders. To list or select individual files, use Restore from Backup.

If NetBackup cannot find any folders, check the Search Folder: setting in the Search Backups dialog box. Also check the range of backups that you are searching (backup history pane). If all of these settings are correct and no folders are found, ask the administrator to see if the NetBackup class that is backing up your files and folders is configured to collect true image restore information.

4. Select the date range of backups that NetBackup will search in order to find the desired folder.

It is best to leave the backup selection at the default date range unless you are restoring a version of the folder that existed before the last full backup or incremental backup.

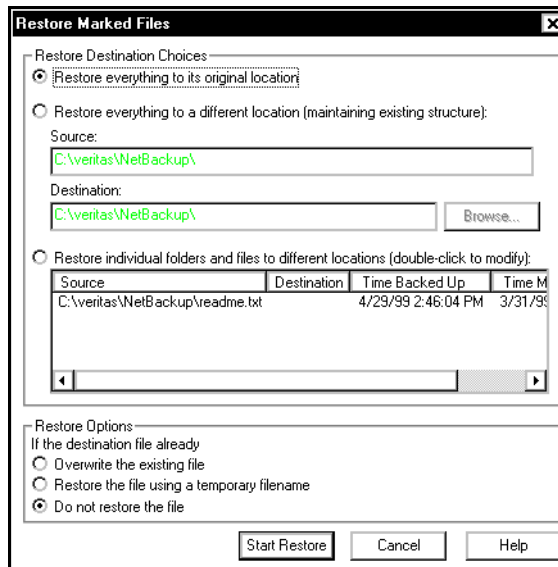
5. Select the folder you want to restore by marking it in the Contents of '<folder>' pane of the NetBackup Restore (True Image) window (you must select from this side of the window). By default, NetBackup restores the folder to its original location.

Note: When a file in the folder has the same filename as a file in the true image backup, NetBackup will delete the file from the folder and replace, or restore, the file from the true image backup. NetBackup will not delete files from the folder that are not in the true image restore.

6. Click Restore Marked Files... on the Restore menu.

Restoring All Files, Folders, or Registry Keys to an Alternate Path

1. Open the NetBackup Restore window.
2. Select README.TXT from the NetBackup folder.
3. Click Restore Marked Files... on the Restore menu. The Restore Marked Files dialog box will appear.

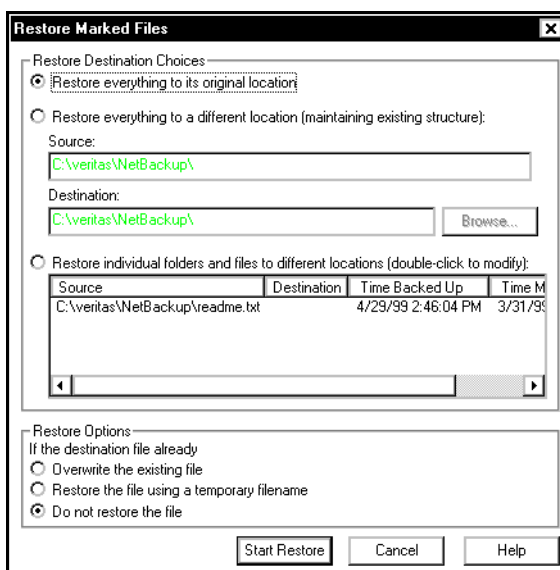


4. Click Restore Everything To a Different Location (maintaing existing structure):.
5. Enter the folder from which the README.TXT file was backed up in the Source:. In this case:
c:\VERITAS\netbackup\
6. Enter the alternate folder to which you want to restore the README.TXT file in the Destination:. In this case:
c:\temp\
7. Select Overwrite Existing Files.
8. Click Start Restore.

NetBackup will restore the README.TXT file to the c:\temp folder.

Restoring Specific Files, Folders, or Registry Keys to an Alternate Path

1. Open the NetBackup Restore window.
2. Select the NetBackup folder.
3. Click Restore Marked Files... on the Restore menu. The Restore Marked Files dialog box will appear.



4. Click Restore Individual Folders and Files To Different Locations (double-click to modify):.
5. Select the files, folders, or registry keys you want to restore.
 - a. Double click the README . TXT. The Enter New Destination dialog box will appear over the Restore Marked Files dialog box.



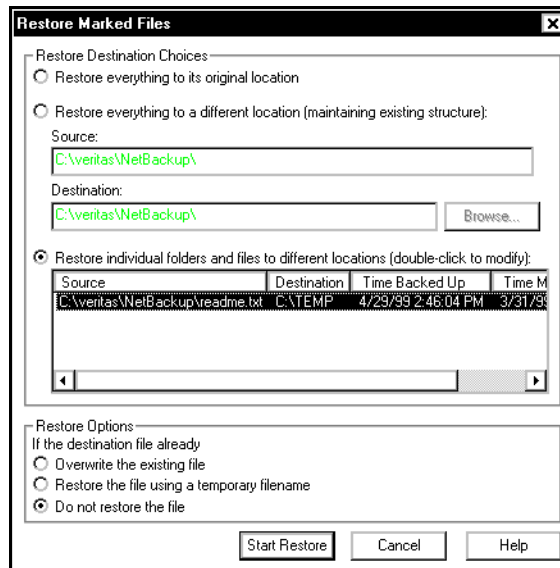
b. Type a new path to restore to.

or

Click the Browse button to browse for and select a new path to restore to.

In this case, we are going to restore to c:\temp.

c. Press OK. The Enter New Destination dialog box will close. The new path entered in Step b will appear in the Destination column.



d. Repeat these steps for each file, folder, or registry key you want to restore

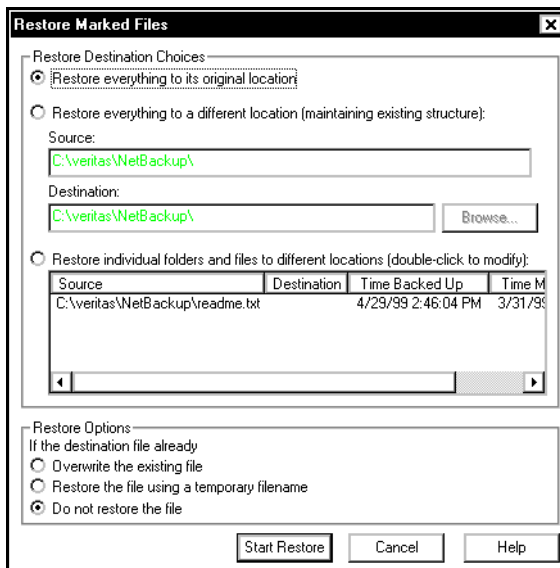
6. Select Overwrite Existing Files.

7. Click Start Restore.

NetBackup will restore the README.TXT file to the specified path.

Restore Using a Temporary Filename

1. Open the NetBackup Restore window.
2. Select README.TXT from the NetBackup folder.
3. Click Restore Marked Files... on the Restore menu. The Restore Marked Files dialog box will appear.

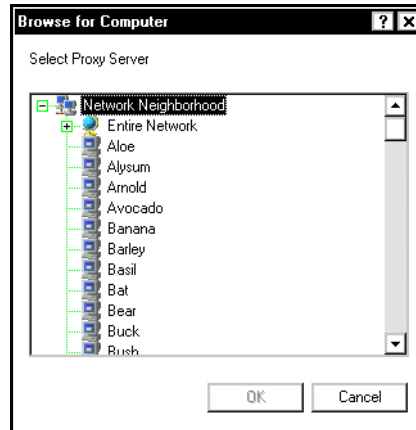


4. Select Restore the File Using a Temporary Filename.
5. Click Start Restore.

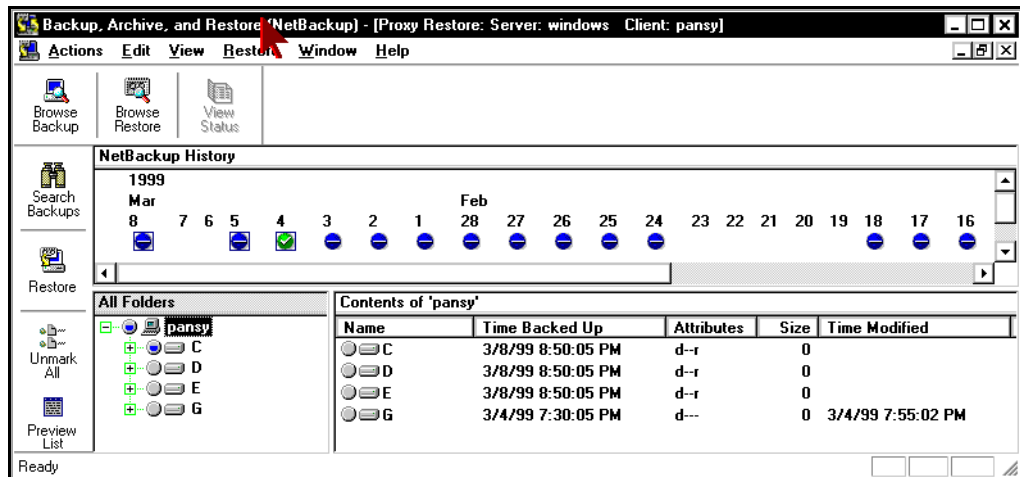
NetBackup will restore the README.TXT file to READMEXXXXXX.TMP. XXXXXX will be something that is generated based on the current date and time.

Proxy Restore

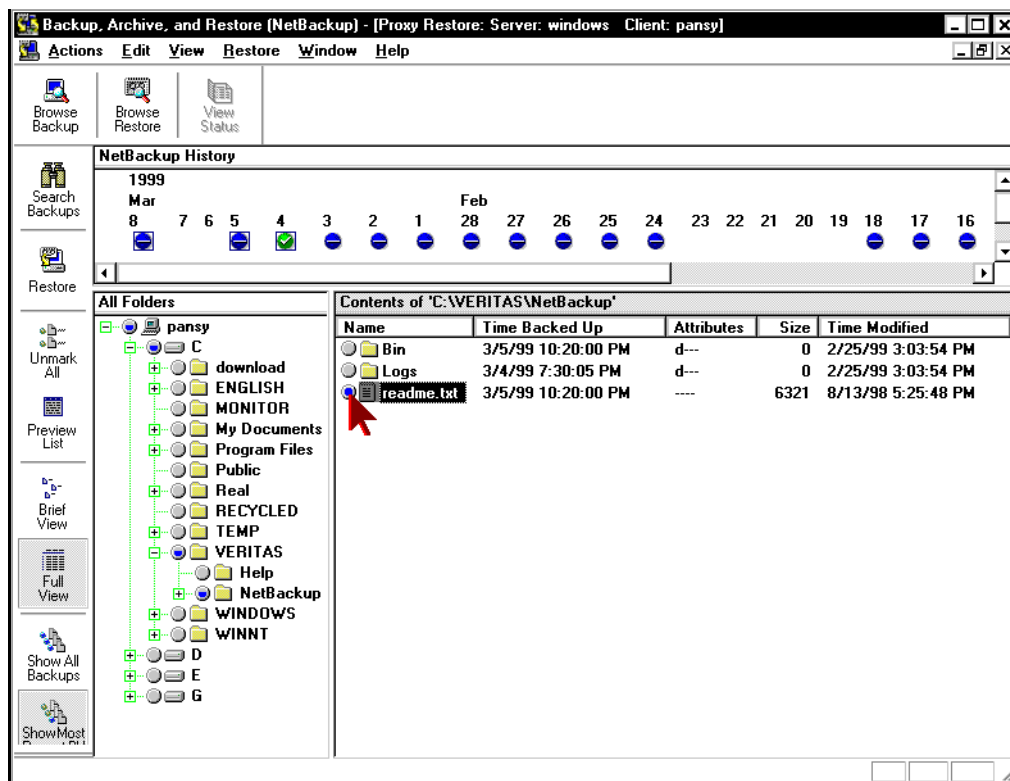
1. Open the NetBackup Restore window.
 - a. Click Restore, then Proxy Restore from Backup from the Actions menu. A Browse for Computer dialog box will appear.



- b. Select the computer whose backup image you want to restore from. For this tutorial we will select a computer called pansy. A NetBackup Restore window will appear.

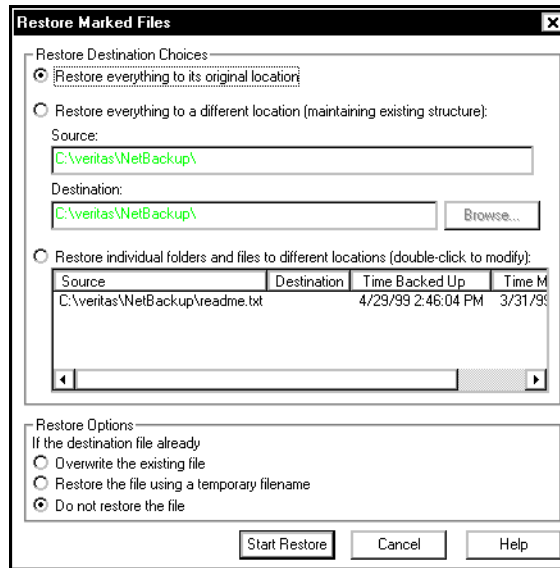


2. Select README.TXT from the NetBackup folder.



3. Open the Restore Marked Files dialog box.
4. There are two ways to open the Restore Marked Files dialog box.
 - Click Restore Marked Files... on the Restore menu.
 - or
 - Click Restore from the vertical toolbar.

The Restore Marked Files dialog box will open.



5. Select Overwrite Existing Files.

6. Click Start Restore.

NetBackup will restore the README.TXT file to the c:\temp folder.

Reference






3



This chapter provides reference information on the NetBackup Browser. It includes a description of the Browser menus, windows and dialog boxes.

NetBackup Icons

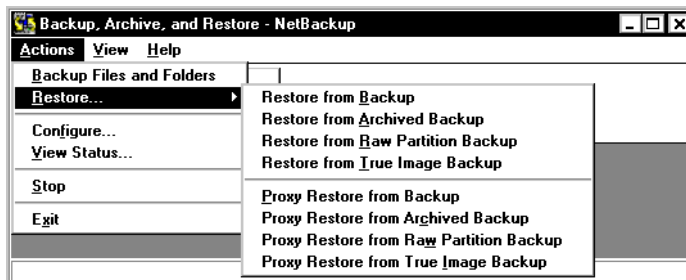
The following table describes NetBackup icons you may see on the Microsoft Windows desktop.

Description	Icon
Represents NetBackup. It is used on the title bar in the Browser, in the program start menu, and Windows Explorer.	
Indicates that the NetBackup Client Job Tracker is running, but there are currently no backups or restores processing. Used in the system tray.	
Indicates that the NetBackup Client Job Tracker is running, with at least one restore processing. Used in the system tray. When the yellow arrow is blinking, you can open the NetBackup Client Job Tracker for an estimate of the restore operation.	
Indicates that the NetBackup Client Job Tracker is running, with at least one backup processing. Used in the system tray. When the yellow arrow is blinking, you can open the NetBackup Client Job Tracker for an estimate of the backup operation.	
Indicates that the NetBackup Client Job Tracker is running, with at least one backup and one restore processing. Used in the system tray with the yellow arrows blinking.	

Menus

This section explains the menu bar commands on the NetBackup Browser.

Actions Menu

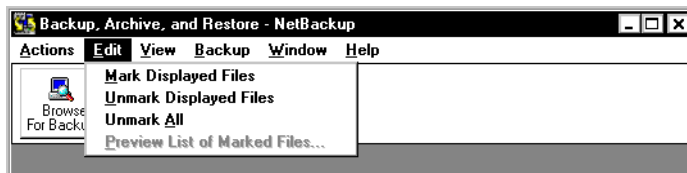


The commands on the Actions menu provide overall control of your NetBackup session.

<u>B</u> ackup Files and Folders	Opens the NetBackup Backup window. From this window, you can select files, folders, or registry keys to back up and then start a backup or archive operation.
<u>R</u> estore...	Opens the submenu and provides access to the following commands.
Restore from <u>B</u> ackup	Opens a NetBackup Restore window. From this window, you can select files, folders, or registry keys saved during previous backups and start a restore operation.
Restore from <u>A</u> rchived Backup	Opens a NetBackup Restore (Archive) window. From this window, you can select files, folders, or registry keys saved during previous archives and start a restore operation.
Restore from <u>R</u> aw Partition Backup	Opens a NetBackup Restore (Raw Partition) window. From this window, you can select raw partitions saved during previous raw partition backups and start a raw partition restore operation.
Restore From <u>T</u> rue Image Backup	Opens a NetBackup Restore (True Image) window. From this window, you can select files, folders, or registry keys saved during previous true image backups and start a true image restore operation.

<u>P</u> roxy Restore from Backup	This feature allows a user on a Windows NT machine to browse the backups of the local Windows NT machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT machine.
Proxy Restore from <u>A</u> rchived Backup	This feature allows a user on a Windows NT machine to browse the archive backup of the local Windows NT machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote machine.
Proxy Restore from <u>R</u> aw Partition Backup	This feature allows a user on a Windows NT machine to browse the Raw Partitian backup of the local Windows NT machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote machine.
Proxy Restore from <u>T</u> rue Image Backup	This feature allows a user on a Windows NT machine to browse the True Image backup of the local Windows NT machine. The remote user can select files, folders, or registry keys from the backup and restore to the local machine. NetBackup will see all the requests as if they were coming from the remote machine.
<u>C</u> onfigure...	Opens the NetBackup Configuration dialog box. From this dialog box, you can specify the parameters that control backups, archives and restores for your client.
<u>V</u> iew Status...	Opens the View Status dialog box. From this dialog box, you can review the progress report of a user operation in progress. You can also review logs from past user directed NetBackup operations.
<u>C</u> lose	This command appears in the <u>A</u> ctions menu when a NetBackup Backup window or a NetBackup Restore window are open. Use this command to close a selected window.
<u>S</u> top	Stops network activities, such as browsing files, folders, or registry keys for restores. This has no affect on a backup or restore that is already in progress.
<u>E</u> xit	Closes all NetBackup dialog boxes and windows. Terminates the browser. Any backups or restores in progress will continue to completion.

Edit Menu



The commands on the Edit menu modify your selections in the currently selected backup or restore window. It appears when the NetBackup Backup window or the NetBackup Restore window are opened.

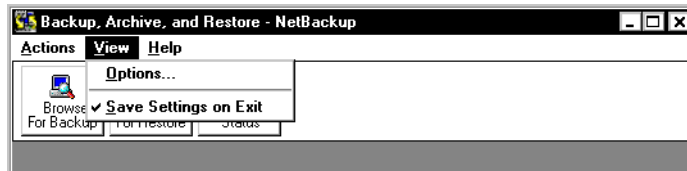
Mark Displayed Files Marks only the files, folders, or registry keys that currently appear in the Contents of '<folder>' pane of the NetBackup Backup window or NetBackup Restore window.

Unmark Displayed Files Unmarks only the selections that currently appear in the Contents of '<folder>' pane of the NetBackup Backup window or NetBackup Restore window.

Unmark All Unmarks all files, folders, or registry keys in this window. You can also execute this command by clicking Unmark All on the NetBackup Restore window toolbar or the NetBackup Backup window toolbar.

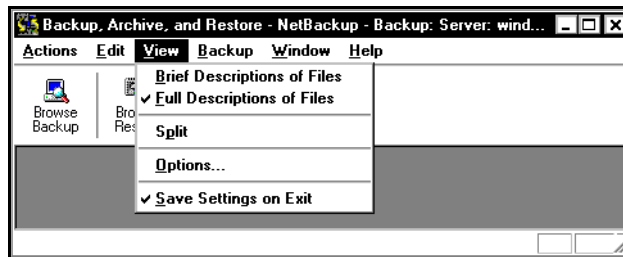
Preview List of Marked Files... Opens the Preview List dialog box. This command is enabled when files, folders, or registry keys have been selected in the NetBackup Backup window or the NetBackup Restore window. You can also execute this command by clicking Preview List of Marked Files... on the NetBackup Restore window toolbar or the NetBackup Backup window toolbar.

View Menu

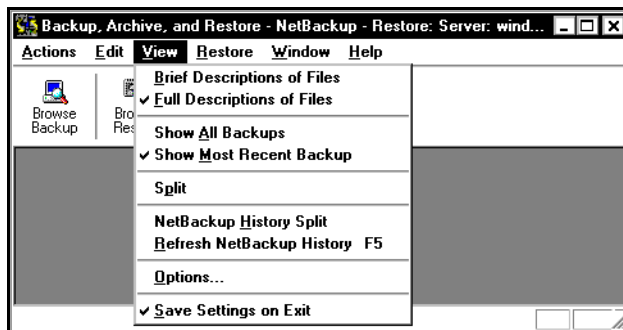


The commands on the View menu control the contents of the NetBackup Backup window and the NetBackup Restore window.

During a backup or archive operation, the following menu will appear.

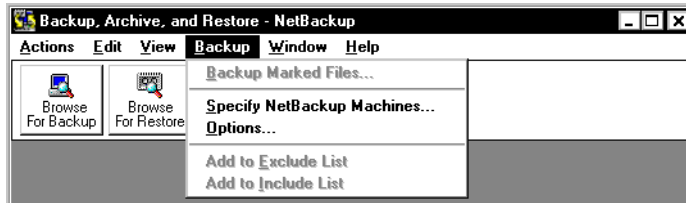


During a restore operation the following menu will appear.



<u>O</u> ptions...	Opens the Options dialog box. Go to "Options Dialog Box" on page 82" for more details.
<u>S</u> ave Settings on Exit	When selected, this command will save window specific settings upon exit.
<u>B</u> rief Descriptions of Files	Shows files, folders, or registry keys without details. You can also execute this command on the NetBackup Backup window toolbar and on the NetBackup Restore window toolbar.
<u>F</u> ull Descriptions of Files	Shows file, folder or registry key details such as size and file permissions. You can also execute this command on the NetBackup Backup window toolbar and on the NetBackup Restore window toolbar.
<u>S</u> plit	Changes the cursor to a double bar with two arrows and positions it over the vertical split bar between the All Folders and Contents of '<folder>' panes. You can then move the cursor left or right to position the split bar.
Show <u>A</u> ll Backups	Shows all instances of files, folders, or registry keys in the currently selected image(s). You can also execute this command on the NetBackup Restore window toolbar.
Most Recent Backups	Shows the most recent backup of files, folders, or registry keys from the currently selected backup image(s). You can also execute this command on the NetBackup Restore window toolbar.
NetBackup <u>H</u> istory Split	Changes the cursor to a double bar with two arrows and positions it over the horizontal split bar between the NetBackup History pane and the All Folders and Contents of '<folder>' panes. You can then move the cursor up or down to position the split bar.
<u>R</u> efresh NetBackup History	Updates information in the NetBackup History pane.

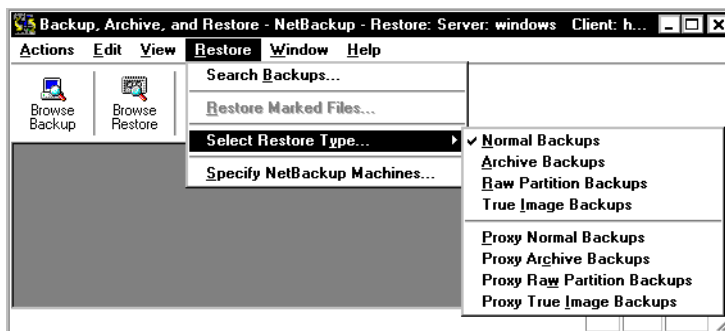
Backup Menu



The Backup menu appears when the NetBackup Backup window is active. The commands on the Backup menu control backup operations.

<u>B</u> ackup Marked Files...	Opens the Backup Marked Files dialog box. You can also execute this command by clicking <u>B</u> ackup on the NetBackup Backup window toolbar.
<u>S</u> pecify NetBackup Machines...	Opens the NetBackup Backup Options dialog box to the <u>S</u> ervers property sheet. Refer to "NetBackup Backup Options Dialog Box" on page 94 for more details.
<u>O</u> ptions...	Opens the Options dialog box to the <u>B</u> ackups property sheet. Refer to "Backups Property Sheet" on page 96 for more details.
Add to <u>E</u> xclude List	Adds the selected files, folders, or registry keys to the Exclude File List. For more details, refer to "Exclude List Property Sheet" on page 119.
Add to <u>I</u> nclude List	Adds the selected files, folders, or registry keys to the Include File List. For more details, refer to "Include List Property Sheet" on page 121.

Restore Menu

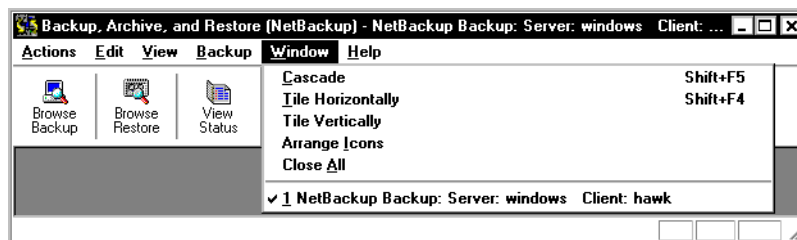


The Restore menu appears when the NetBackup Restore window is active. The commands on the Restore menu control restore operations.

Search <u>B</u> ackups...	Opens the Search Backups dialog box. You can also execute this command by clicking Search Backups on the NetBackup Restore window toolbar.
<u>R</u> estore Marked Files...	Opens the Restore Marked Files dialog box. You can also execute this command by clicking <u>R</u> estore on the NetBackup Restore window toolbar.
<u>S</u> elect Restore Type...	Opens the submenu and provides access to the following commands.
Normal <u>B</u> ackups	Opens the NetBackup Restore window. You can select files, folders, or registry keys saved during previous backups and start a restore operation.
<u>A</u> rchive Backups	Opens the NetBackup Restore (Archive) window. You can select files, folders, or registry keys saved during previous archives and start a restore operation.
<u>R</u> aw Partition Backups	Opens the NetBackup Restore (Raw Partition) window. You can select and start a raw partition restore operation.
<u>T</u> rue Image Backups	Opens the NetBackup Restore (True Image) window. You can select files, folders, or registry keys and start a true image restore operation.
Proxy Normal Backups	This feature allows a user on a Windows NT machine to browse the backups of the local Windows NT machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT machine.

Proxy Archive Backups	This feature allows a user on a Windows NT machine to browse the archives of the local Windows NT machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT machine.
Proxy Raw Partition Backups	This feature allows a user on a Windows NT machine to browse the raw partition backups of the local Windows NT machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT machine.
Proxy True Image Backups	This feature allows a user on a Windows NT machine to browse the true image backups of the local Windows NT machine. The remote user can select files, folders, or registry keys from the backup and restore to the remote machine. NetBackup will see all the requests as if they were coming from the remote Windows NT machine.
<u>S</u> pecify NetBackup Machines...	Opens the NetBackup Restore Options dialog box. Refer to "NetBackup Backup Options Dialog Box" on page 94" for more details.

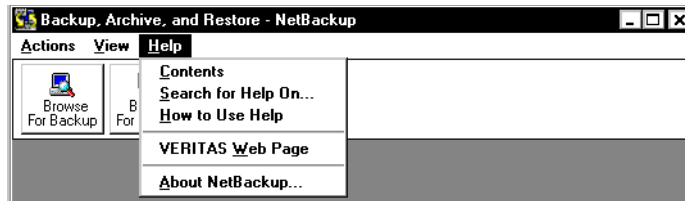
Window Menu



The Window menu has commands for arranging your NetBackup windows. It appears when the NetBackup Backup window or the NetBackup Restore window is opened.

<u>C</u> ascade	Arranges NetBackup windows so they overlap, but the title bars will still be visible.
T <u>i</u> le H <u>o</u> rizontally	Modifies the size of NetBackup windows and arranges them horizontally on the desktop.
T <u>i</u> le V <u>e</u> rtically	Modifies the size of NetBackup windows and arranges them vertically on the desktop.
A <u>r</u> range <u>I</u> cons	Arranges icons so they are located in the lower left corner of the desktop.
C <u>l</u> ose <u>A</u> ll	Closes the NetBackup Backup windows and the NetBackup Restore windows.

Help Menu














This menu provides access to the on-line instructions for using NetBackup.











Windows




This section explains the windows on the NetBackup Browser.

NetBackup Window Icons

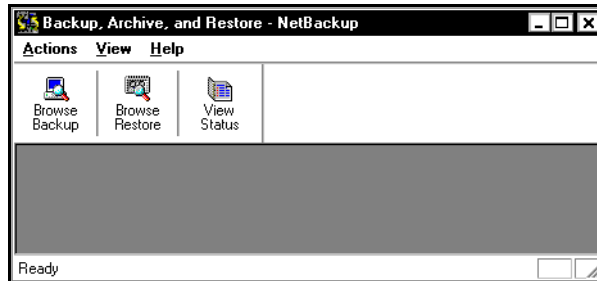
This section describes all icons displayed in the windows.

Description	Icon
Represents NetBackup. It is used on the title bar in the Browser, in the program start menu, and Windows Explorer.	
Represents a backup. It is used on the title bar of the backup window.	
Represents a restore. It is used on the title bar of the restore window.	
Represents a floppy drive. Used in the All Folders pane.	
Represents a logical hard drive. Used in the All Folders pane.	
Represents a cd rom drive. Used in the All Folders pane.	
Represents a networked drive. Used in the All Folders pane.	
Represents a client PC. Used in the All Folders pane.	
Expand or collapse these structures to see more or fewer subentries. A plus sign indicates that the folder can be expanded. A minus sign indicates that the folder can be collapsed. Used in the All Folders pane.	
Represents a closed folder that may or may not contain other items. Used in the All Folders pane where only folders are displayed under drives. Also in the Contents of '<folder>' pane.	
Represents an opened folder that may or may not contain other items. Used in the All Folders pane where only folders are displayed under drives.	




Description	Icon
Represents a file or a folder, with all of its contents, that has been marked for backup or restore. Used in the All Folders pane and the Contents of '<folder>' pane.	
Represents a folder with some of its contents marked for backup or restore. Used in the All Folders pane and the Contents of '<folder>' pane.	
Represents a file or folder that has not been marked for backup or restore, but could be. Used in the All Folders pane and the Contents of '<folder>' pane.	
Represents an object with all of its contents marked for backup or restore, but the object itself cannot be marked. Used in the All Folders pane and the contents.	
Represents an object with some of its contents marked for backup or restore, but the object itself cannot be marked. Used in the All Folders pane and the contents and Contents of '<folder>'.	
Represents an object that cannot be marked for backup or restore but contains other objects that can be marked for backup or restore. Used in the All Folders pane and the contents and Contents of '<folder>'.	
Represents a folder that wasn't specifically backed up, but at least some of its contents were backed up. Used in the All Folders pane of the NetBackup Restore window.	
Represents a file that doesn't have an icon associated with it. Used in the Contents of '<folder>' pane.	
Represents the entire registry. Used in the All Folders pane. The registry opens to two base keys: HKEY_LOCAL_MACHINE and HKEY_USERS.	
Represents a registry key. Used in the All Folders pane. Also used in Contents of '<folder>' pane if it contains subkeys.	

Description	Icon
Represents the entire network. Used in the All Folders pane.	
Represents a specific network. Used in the All Folders pane and the Contents of '<folder>' pane.	
Represents a domain within a network. Used in the All Folders pane and the Contents of '<folder>' pane.	

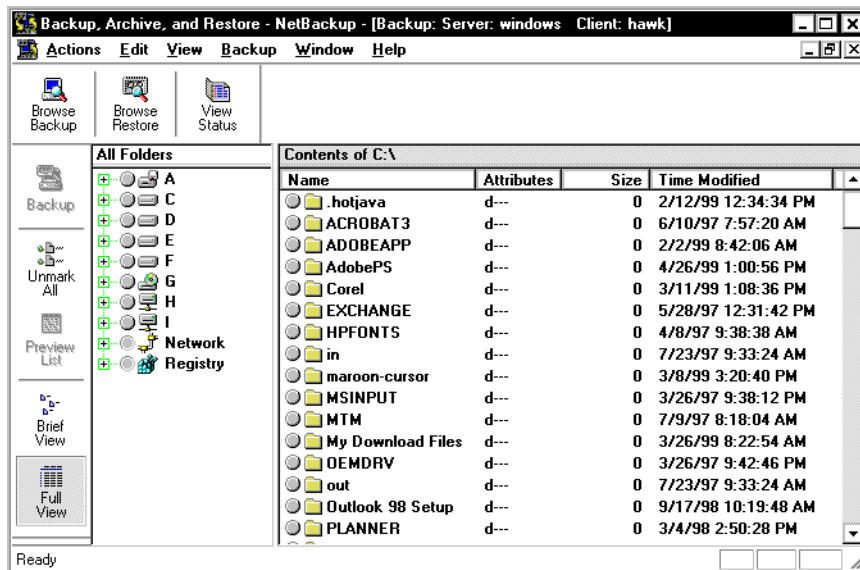
Backup, Archive, and Restore - NetBackup Window



This window appears when you start NetBackup.

Button	Description
	Opens the NetBackup Backup window.
	Opens the NetBackup Restore window.
	Opens the View Status dialog box.

NetBackup Backup Window



This window shows the files, folders, or registry keys you can mark for back up. Access this window:

- From the Actions menu, click Backup Files and Folders
- From the toolbar, click Browse Backup

You can position this window separately. You can also cascade, tile or minimize the window by using commands from the Window menu.

Buttons

Button Description



Opens the Backup Marked Files dialog box.



Unmarks all files, folders and registry keys in this window. You can also execute this command by selecting Unmark All from the Edit menu.



Opens the Preview List dialog box during a backup operation. You can also execute this command by selecting Preview List of Marked Files... from the Edit menu.



Shows files and folders only. You can also execute this command by selecting Brief Descriptions of Files from the View menu.

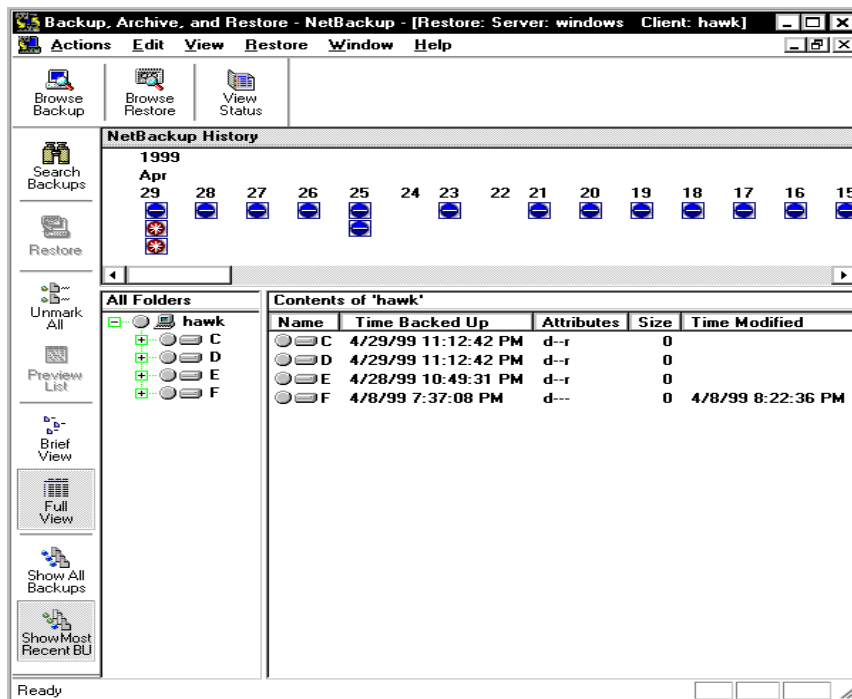


Shows file, folder or registry key details such as size and file permissions. You can also execute this command by selecting Full Descriptions of Files from the View menu.

Panes

The NetBackup Backup window contains two panes: All Folders and Contents of '<folder>'. To adjust the width of the panes, position the cursor over the split bar. The cursor will change to a double bar with two arrows. Press the left mouse button and move the cursor left or right to position the split bar.

NetBackup Restore Window



This window shows the files, folders, or registry keys that you can mark for restore. Access this window:

- From the Actions menu, click Restore, then Restore from Backup
- From the toolbar, click the Browse Restore

The folder trees in this window contain only files and folders that were backed up. You can position this window separately. You can also cascade, tile or minimize the window by using the command from the Window menu.

Note: If the NetBackup Restore window does not show any files, folders, or registry keys, check the items mentioned in "Restoring a True Image of a Folder" on page 34.

Buttons

Button	Description
	Opens the Search Backups dialog box.
	Opens the Restore Marked Files dialog box.
	Unmarks all files, folders, or registry keys in this window. You can also execute this command by selecting Unmark All from the <u>E</u> dit menu.
	Opens the Preview List dialog box during a restore operation. You can also execute this command by selecting <u>P</u> review List of Marked Files... from the <u>E</u> dit menu.
	Shows files and folders only. You can also execute this command by selecting <u>B</u> rief Descriptions of Files from the <u>V</u> iew menu.
	Shows file, folder or registry key details such as size and file permissions. You can also execute this command by selecting <u>F</u> ull Descriptions of Files from the <u>V</u> iew menu.
	Shows all instances of the files, folders, or registry keys in the currently selected image(s). You can also execute this command by selecting Show <u>A</u> ll Backups from the <u>V</u> iew menu.
	Shows the most recent backup of files, folders, or registry keys in the selected backup images. You can also execute this command by selecting Show <u>M</u> ost Recent Backup from the <u>V</u> iew menu.



Opens the Search Backups dialog box.



Opens the Restore Marked Files dialog box.



Unmarks all files, folders, or registry keys in this window. You can also execute this command by selecting Unmark All from the Edit menu.



Opens the Preview List dialog box during a restore operation. You can also execute this command by selecting Preview List of Marked Files... from the Edit menu.



Shows files and folders only. You can also execute this command by selecting Brief Descriptions of Files from the View menu.



Shows file, folder or registry key details such as size and file permissions. You can also execute this command by selecting Full Descriptions of Files from the View menu.



Shows all instances of the files, folders, or registry keys in the currently selected image(s). You can also execute this command by selecting Show All Backups from the View menu.



Shows the most recent backup of files, folders, or registry keys in the selected backup images. You can also execute this command by selecting Show Most Recent Backup from the View menu.

Panes

The NetBackup Restore window is split into three panes: the NetBackup History pane on the top, the All Folders pane on the left and the Contents of '<folder>' pane on the right.

Note: If the client belongs to more than one class, the default display starts with the last full backup that occurred first. For example, assume that the client belongs to Class A and Class B and full backups occur for both of them. If the last full backup for Class A occurred before the one for Class B, then the display shows files ranging from the time of the Class A full backup.

To adjust the height of the NetBackup History pane, position the cursor over the split bar. The cursor will change to a double bar with two arrows. Press the left mouse button and move the cursor up or down to position the split bar.

To adjust the width of the All Folders pane and the Contents of '<folder>' pane, position the cursor over the split bar. The cursor will change to a double bar with two arrows. Press the left mouse button and move the cursor left or right to position the split bar.

Note: If you are restoring from a true image backup, the NetBackup Restore window shows only the folders that were included in true image backups. Files do not appear in this window because you cannot select individual files for a true image restore.

NetBackup History Pane

The NetBackup History pane shows the NetBackup image(s). When first opened, the following backup images are selected by default:

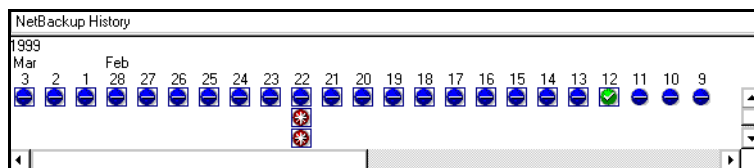
- The most recent full backup.
- All cumulative-incremental backups and differential-incremental backups since the most recent full backup.
- All user directed backups that have occurred since the most recent full backup.

If there is no full backup, only the most recent image will be selected.

▼ To Open the NetBackup History Pane

- Position the cursor over the horizontal split bar. The cursor will change to a double bar with two arrows. Press the left mouse button and move the cursor up or down to position the split bar.
or
- On the View menu, click NetBackup History Split. This changes the cursor to a double bar with two arrows. Move the cursor up or down to position the split bar. Click the left mouse button to hold position.

▼ Backup History as a Timeline



To show the NetBackup History pane as a timeline from the **View** menu, click **Options...** to open the Options dialog box. Select **Show Backup History as a Timeline** checkbox.

The icons, representing images, appear directly underneath the date of the backups. Icons with a square represent selected backup images. Several backup image icons may appear below a date. The most current backup image is on top of the list. As you move the cursor over the icons, tool tips will show the schedule type and the date and time of the backup.

Helpful Hint:

If you do not see tool tips, open the Options dialog box from the **View** menu and select **Show Tool Tips**.

Description

Icon

This green icon represents a full backup.



This blue icon represents a differential incremental backup.



This light blue icon represents a cumulative incremental backup.



This red star icon represents a user directed backup.



Represents a user directed archive. Used in the backup images timeline. When selected, a border appears around the icon.



This grey icon represents an unknown type of backup.



▼ Backup History as a Detailed List

NetBackup History							
Time Backed Up	Time Expires	Files	Size	Compressed	Schedule Type	Class Name	Key
3/3/99 9:59:12 PM	4/5/99	179	17240	N	Diff Incr Backup	production_pcs_NT_3-0	
3/2/99 8:43:07 PM	4/4/99	194	18416	N	Diff Incr Backup	production_pcs_NT_3-0	
3/1/99 8:29:45 PM	4/3/99	417	98053	N	Diff Incr Backup	production_pcs_NT_3-0	
2/28/99 10:15:59 PM	4/2/99	122	28944	N	Diff Incr Backup	production_pcs_NT_3-0	

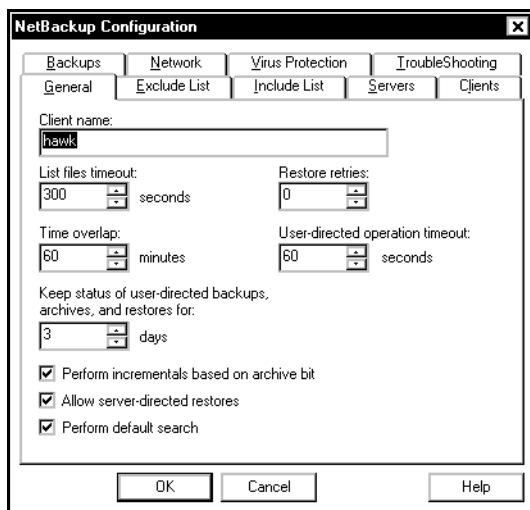
To show the NetBackup History pane as a detailed list, clear the Keep Status of User-Directed Backups, Archives, and Restores For: checkbox on the Options dialog box. The list starts with the most recent backup and includes the following information (reading from left to right).

- Date and time when the backup occurred.
- Date when NetBackup will expire the backup and delete it from the NetBackup History pane.
- Number of files in the backup.
- Size of the backup in kilobytes.
- Whether the backup is compressed (Y for yes, N for no).
- Type of schedule.
- Name of the class associated with the backup. The system administrator configures the class names, as explained in the *NetBackup System Administrator's Guide - UNIX* or the *NetBackup System Administrator's Guide - Windows NT Server*.
- Keyword assigned to the backup.

NetBackup Configuration Dialog Box

This section explains the property sheets found on the NetBackup Configuration dialog box on the NetBackup Browser.

General Property Sheet



To access this property sheet:

1. From the Actions menu, select Configure....
2. Click the General tab to open the property sheet.

Use this property sheet to set any of the configuration parameters for your client. Only the system administrator should change the following parameters.

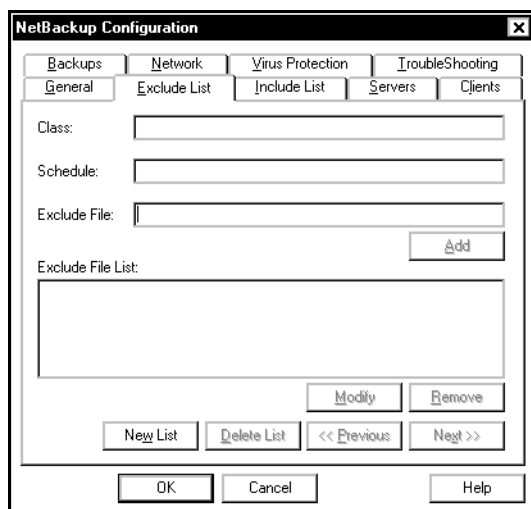
- List Files Timeout:
- Restore Retries:
- Time Overlap:
- User Directed Operation Timeout:
- Perform Incrementals Based on Archive Bit:
- Allow Server-Directed Restores:

System administrators should refer to "General Property Sheet" on page 115 for details on these parameters.

The NetBackup client user as well as the system administrator can change following parameters.

Client Name:	Specify the name of your client. This name is used when backing up, archiving and restoring files, folders, or registry keys. It must match the one in the NetBackup server class configuration.
Keep Status of User-Directed Backups, Archives, and Restores For:	Specify the number of days to store progress reports before the system will automatically delete them. Default is 3 days. The minimum allowable value is zero. The maximum is 9,999
Perform Default Search:	<p>If selected, NetBackup will automatically search the default range of backup images and display the backed up folders and files whenever a restore window is opened.</p> <p>Clear this box to disable the initial search. The NetBackup Restore window will not show any files or folders when initially opened. Clicking a backup image, or selecting a range of backup images, will initiate a search.</p> <p>By default, this box is selected.</p>
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Exclude List Property Sheet

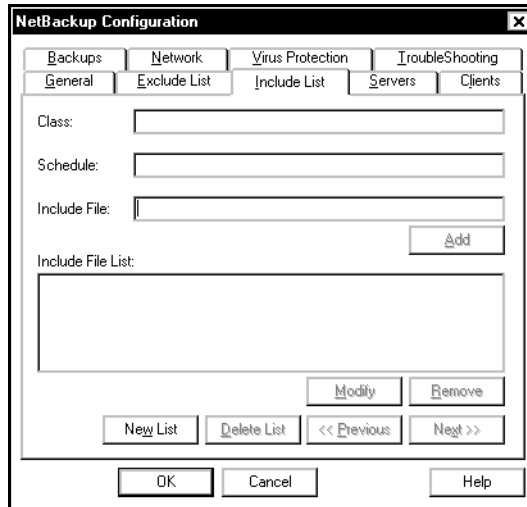


The image shows a screenshot of the "NetBackup Configuration" dialog box, specifically the "Exclude List" tab. The dialog has a title bar with "NetBackup Configuration" and a close button. Below the title bar are several tabs: "Backups", "Network", "Virus Protection", "TroubleShooting", "General", "Exclude List" (selected), "Include List", "Servers", and "Clients". The "Exclude List" tab contains the following fields and controls:

- "Class:" text box
- "Schedule:" text box
- "Exclude File:" text box with an "Add" button to its right
- "Exclude File List:" list box
- "Modify" and "Remove" buttons
- "New List", "Delete List", "<< Previous", and "Next >>" buttons
- "OK", "Cancel", and "Help" buttons at the bottom

Only the system administrator should change the parameters on this property sheet. System administrators should refer to "Exclude List Property Sheet" on page 119 for details on these parameters.

Include List Property Sheet

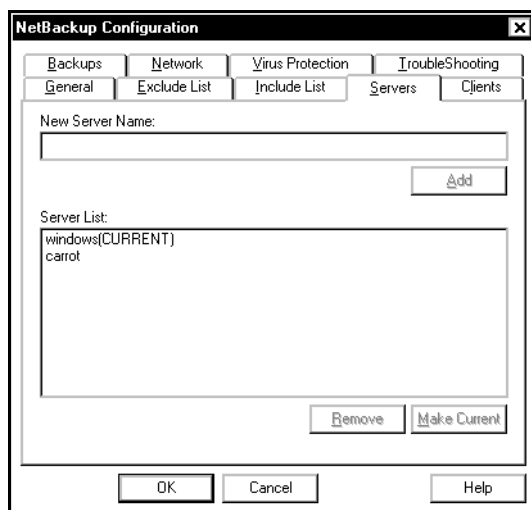


The image shows the 'NetBackup Configuration' dialog box with the 'Include List' tab selected. The dialog has a title bar with a close button. Below the title bar are two rows of tabs: 'Backups', 'Network', 'Virus Protection', and 'TroubleShooting' in the first row; 'General', 'Exclude List', 'Include List', 'Servers', and 'Clients' in the second row. The 'Include List' tab is active. The main area contains the following fields and controls:

- 'Class:' followed by a text input field.
- 'Schedule:' followed by a text input field.
- 'Include File:' followed by a text input field and an 'Add' button.
- 'Include File List:' followed by a large empty list box.
- Below the list box are 'Modify' and 'Remove' buttons.
- At the bottom of the main area are 'New List', 'Delete List', '<< Previous', and 'Next >>' buttons.
- At the very bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons.

Only the system administrator should change the parameters on this property sheet. System administrators should refer to "Include List Property Sheet" on page 121 for details on these parameters.

Servers Property Sheet



To access this property sheet:

1. From the Actions menu, select Configure...
2. Click the Servers tab to open the property sheet.

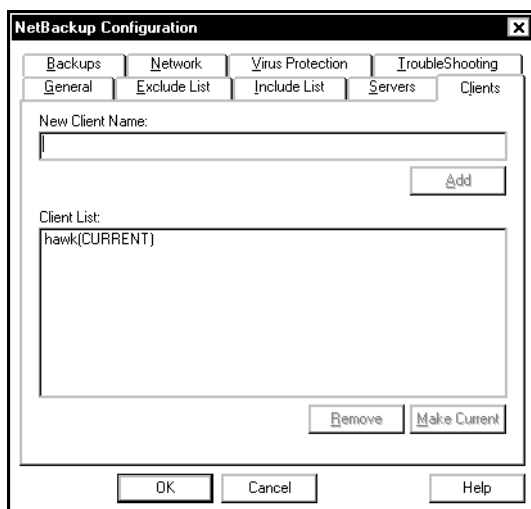
Use this property sheet to add new NetBackup servers and to specify the default master server for clients.

Note: Most changes made to the this property sheet will not apply to currently open backup or restore windows. If, however, a server is added, the open windows will be able to switch to them.

All changes will apply to all backup and restore windows opened after the property sheet modifications have been saved. Click OK to save the property sheet changes

New Server Name:	To add another NetBackup server to the Server List:, type the name of the new server in the New Server Name: text box and click <u>A</u> dd. The name must be as defined by the system administrator on that server.
<u>A</u> dd	Adds the server, entered in the New Server Name: text box, to the Server List:.
Server List:	<p>Shows the names of the NetBackup servers that require access to the client. The master server and any slave servers must appear in this list. The master server manages user operations and must be marked as CURRENT. To mark a master server as CURRENT, select a server from the Server List: and click <u>M</u>ake Current. The word CURRENT appears in parentheses beside the name of the new master server.</p> <p>To add a server to the Server List:, key in the server name in the New Server Name: and click <u>A</u>dd. To remove a name from the Server List:, select the server and click <u>R</u>emove.</p> <p>CAUTION! Be careful about removing servers from the list. Scheduled backups will fail if you remove a master server or slave server from the Server List:.</p>
<u>R</u> emove	Removes a server. First highlight the server in the Server List:, then click <u>R</u> emove.
<u>M</u> ake Current	Designates a master server. First highlight the server in the Server List:, then click <u>M</u> ake Current.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Clients Property Sheet



To access this property sheet:

1. From the Actions menu, select Configure...
2. Click the Clients tab to open the property sheet.

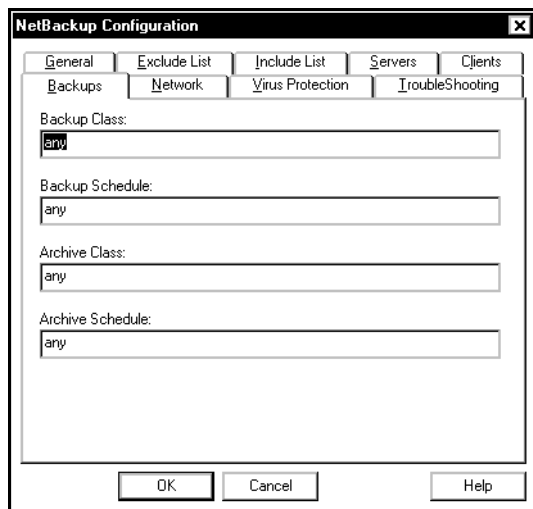
Use this property sheet to specify the name of the client whose backups you want to browse for files, folders, or registry keys to restore. You can also add names of remote clients.

Note: Most changes made to the this property sheet will not apply to currently open backup or restore windows. If, however, a client is added, the open windows will be able to switch to them.

All changes will apply to all backup and restore windows opened after the property sheet modifications have been saved. Click OK to save the property sheet changes.

New Client Name:	To add another client name to the Client List:, type the name of the client in the New Client Name: and click <u>A</u> dd. The client name entered must also be defined in a class on the NetBackup server.
<u>A</u> dd	Adds the client, entered in the New Client Name: box, to the Client List:.
Client List:	<p>The Client List: contains the client name for your computer. It can also contain the names of remote NetBackup clients. You can select local or remote NetBackup clients on which to perform NetBackup operations.</p> <p>The NetBackup server administrator must set up the required permissions before you can browse and restore from any remote client.</p> <p>To perform a NetBackup operation on a NetBackup client, select the name from the Client List: and click <u>M</u>ake Current. The word CURRENT appears in parentheses beside the name of the new default client.</p> <p>To add a client to the Client List:, key in the client name in New Client Name: and click <u>A</u>dd.</p> <p>To remove a name from the Client List:, select the client and click <u>R</u>emove.</p>
<u>R</u> emove	Removes a client from the Client List:. First highlight the client in the Client List: then click <u>R</u> emove.
<u>M</u> ake Current	Designates the client backup images you can browse for restore operations. First highlight the server in the Client List:, then click <u>M</u> ake Current.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Backups Property Sheet



To access this property sheet:

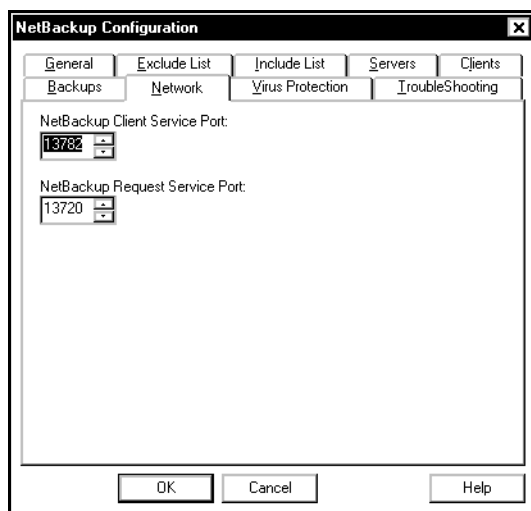
1. From the Actions menu, select Configure...
2. Click the Backups tab to open the property sheet.

Use this property sheet to specify specific class and schedules to use when you start a backup from the client.

Note: Changes made to the this property sheet will not apply to currently open backup window. The changes will apply to all backup window opened after the property sheet modifications have been saved. Click OK to save the property sheet changes.

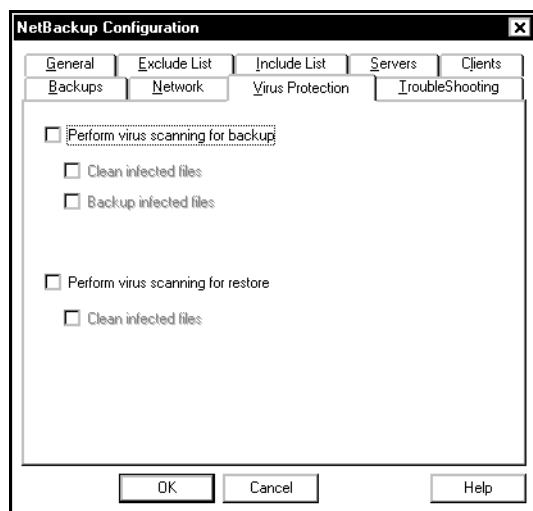
Backup Class:	Specify the class to use for user-directed backups of this client. If you set this value to any (default), NetBackup uses the first class that it finds with both the client name and a user-directed backup schedule.
Backup Schedule:	Specify the schedule to use for the user-directed backups for this client. If you set this value to any (default), NetBackup uses the first user-directed backup schedule in the first class that it finds with both the client name and a user-directed backup schedule.
Archive Class:	Specify the class to use for user-directed archives of this client. If you set this value to any (default), NetBackup uses the first class that it finds with both the client name and a user-directed archive schedule.
Archive Schedule:	Specify the user-directed archive schedule to use for user-directed archives of this client. If you set this value to any (default), NetBackup uses the first user-directed archive schedule in the first class that it finds with both the client name and a user-directed archive schedule.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Network Property Sheet



Only the system administrator should change the parameters on this property sheet. System administrators should refer to "Network Property Sheet" on page 123 for details on these parameters.

Virus Protection Property Sheet



To access this property sheet:

1. From the **A**ctions menu, select **C**onfigure....
2. Click the **V**irus Protection tab to open the property sheet.

Use this property sheet to configure the NetBackup client to pre-scan data before it is backed up. By default, virus scanning is turned off.

Note: The changes and options in this dialog box do not apply to any open windows. The values are set on a machine basis. If an option's value is changed, the next backup or restore operation will see the changed value, no matter where the operation was initiated.

Perform Virus Scanning for Backup	Select this option to perform virus scanning and detect any infected files. NetBackup does not attempt to correct or backup the infected files. The activity log is updated with the total number of scanned files, and infected files.
Clean Infected Files	Select this option to correct the infected files. If a file cannot be cleaned, it is skipped and will not be backed up. The activity log is updated with the infected file name and its associated virus name.

Backup Infected Files	Select this option to include infected files in the backup. However, backing up infected files is not recommended. The data still contains the virus when restored to another system. The activity log is updated with the infected file name and its associated virus name.
Perform Virus Scanning for Restore	Select this option to perform virus scanning and detect any infected files. NetBackup does not attempt to correct or restore the infected files. The activity log is updated with the total number of scanned files, and infected files.
Clean Infected Files	Select this option to correct the infected files. If a file cannot be cleaned, it is skipped and will not be restored. The activity log is updated with the infected file name and its associated virus name.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Activity Logs

The activity logs are located in the in the following folder.

`install_path\VERITAS\NetBackup\logs\bpkar\ymmdd.log` for Windows NT

`install_path\VERITAS\NetBackup\logs\bpcd\ymmdd.log` for Windows 95/98

Virus scanning information is logged to the backup activity logs only if virus scanning option is enabled and it is only logged on the client. Messages about infected files will also be sent to the server so that they appear in the reports.

Limitations

Files with the following conditions are not scanned for viruses:

- Fully qualified file names longer than 256 characters
- Compressed or zipped files
- Open files that are locked

Suggestions

Running another anti-virus software, while running NetBackup with the virus scanning option enabled:

- may slow down the NetBackup's virus scanning operation
- result in unnecessary alerts or unexpected warning message boxes

New viruses constantly appear, so it is important to keep the protection signature files, or DAT files, up to date.

To download the latest DAT files:

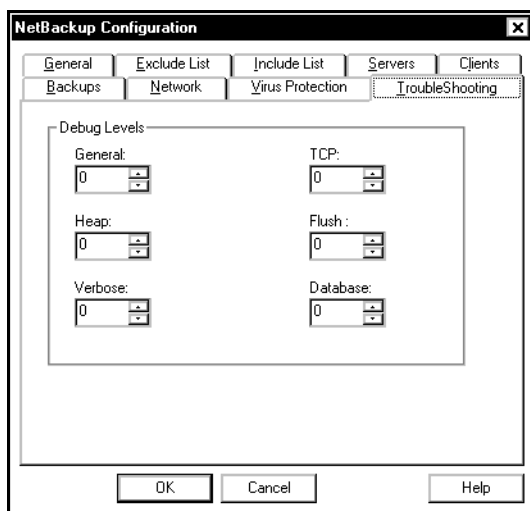
1. Select VERITAS Web Page from the Help menu. Your browser will open to the VERITAS website.
2. Follow the virus scanning link for instructions to download DAT files. The following files will be available for download.

```
scan.dat  
clean.dat  
names.dat
```

3. Copy these files to the `install_path\VERITAS\NetBackup\bin` folder.

It is recommended to download these files every 30 days.

Troubleshooting Property Sheet



Only the system administrator should change the parameters on this property sheet. System administrators should refer to "Troubleshooting Property Sheet" on page 124 for details on these parameters.

Dialog Boxes

This section describes the dialog boxes on the NetBackup Browser.

Options Dialog Box



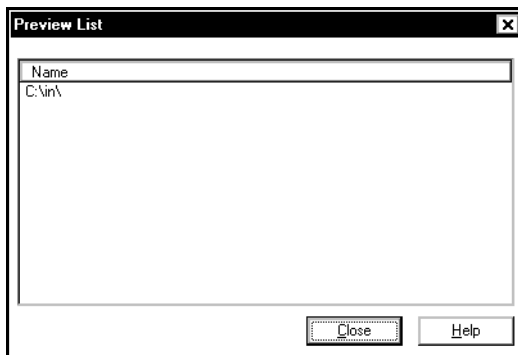
To access this dialog box, select **O**ptions... from the **V**iew menu. Use this dialog box to control display options on the NetBackup Browser.

Show T oolbar	Shows the NetBackup toolbars.
Show Tool T ips	Shows tool tips. When the mouse pointer moves over the different elements of the NetBackup Browser, the tool tips appear.
Show S tatus Bar	Shows the NetBackup status bar.
Text On B uttons	Shows text on toolbar buttons. By default, this check box is clear.
Include D escription Bar for Panes	Shows the description bars on the backup and restore window panes. Clear this check box to turn off the description bars.
Show Backup H istory as a Timeline	Shows the NetBackup History pane as a timeline. Clear this check box to show the NetBackup History pane as a detailed list.
O K	To accept changes to the parameters, click this button.
C ancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.

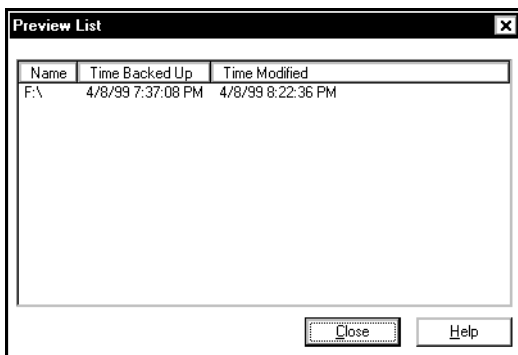
Preview List Dialog Box

Access this dialog box:

- From the NetBackup Backup window, select Preview List of Marked Files.... The following will appear.



- From the NetBackup Restore window, select Preview List of Marked Files.... The following will appear.

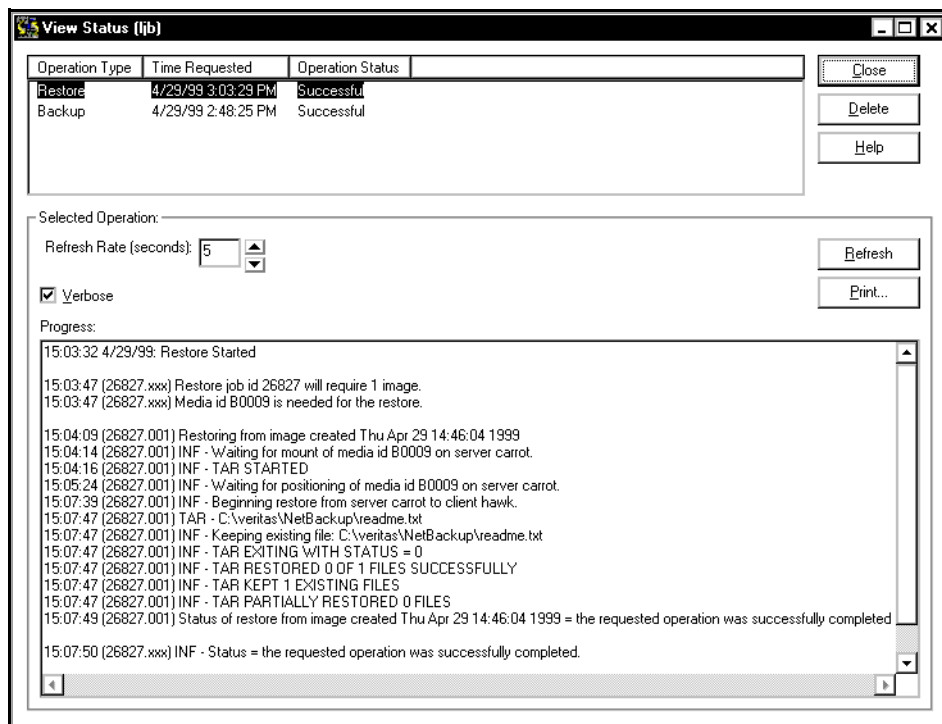


- From the Edit menu, select Preview List of Marked Files.... The Preview List dialog box which appears depends upon the backup or restore window currently selected.

Use this dialog box to view all of the files, folders, or registry keys you have marked. This is a view-only dialog box.

Name	Lists the file or folder being restored.
Time Backed Up	Lists the time the backup was initiated.
Time Modified	Lists the time that the file or directory, that was backed up, was changed.
<u>C</u> lose	Closes the dialog box. <u>C</u> lose does not terminate NetBackup or affect other dialog boxes or windows.
Help	To view on-line help for this dialog box, click this button.

View Status Dialog Box



Access this dialog box:

- From the Actions menu, select View Status....
- From the toolbar on the Backup, Archive, and Restore - NetBackup window, click View Status.

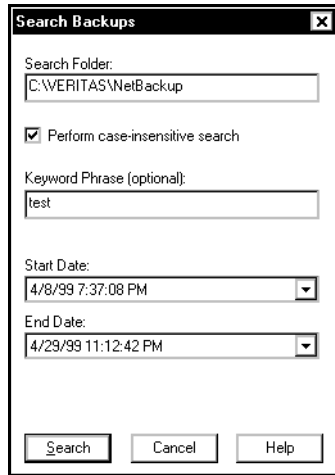
Use this dialog box to view the results of each user operation in a progress report.

Operations List	Lists operation status reports for NetBackup operations. The most current NetBackup operation is on top of the list. By default NetBackup operation status reports will be stored on your computer for three days. Refer to "General Property Sheet" on page 67 for more information on changing the Keep Status of User-Directed Backups, Archives, and Restores For: configuration setting.
Operation Type	Shows the type of NetBackup operation for the selected progress report: backup, archive and restore.
Time Requested	Shows the start date and time of the selected NetBackup operation. The format of the start date and time depends upon how the date and time display has been configured on the computer.
Operation Status	Shows the status of a NetBackup operation.
<u>C</u> lose	Closes the dialog box. <u>C</u> lose does not terminate NetBackup or affect other dialog boxes or windows.
<u>D</u> elete	Deletes the progress report selected in the Operations List. First select the progress report in the Operations List then click <u>D</u> elete. Operation status reports are automatically deleted after a specified number of days. The Keep Status of User-Directed Backups, Archives, and Restores For: parameter in the General Property Sheet on the NetBackup Configuration dialog box specifies the number of days.
Help	To view on-line help for this dialog box, click this button.
Refresh Rate (seconds):	Changes the rate at which NetBackup updates the Progress display for the selected operation. Recommended value is 10. This parameter can be set at any time during a NetBackup operation. Enter a value (in seconds) in Refresh Rate (seconds):. or Use the spin buttons to the right of Refresh Rate (seconds):. A value of 0 turns off automatic refreshing.
<u>R</u> efresh	Updates the Progress display for the selected NetBackup operation. <u>R</u> efresh is enabled when a NetBackup operation is selected from the Operations List.
<u>V</u> erbose	Generates a more detailed progress report for the selected NetBackup operation.

Print...	Opens the Microsoft Windows print dialog box and prints out the progress report for the selected NetBackup operation.
Progress	<p>Displays the progress of the selected operation. To update the display every ten seconds, set the Refresh Rate (seconds): parameter to 10. If the Refresh Rate (seconds): parameter is not set, the user can click <u>R</u>efresh to view the progress of the selected NetBackup operation.</p> <p>Each message begins with the time of the related event and an acronym that indicates the nature of the message. Progress also lists all the media IDs used to store the data.</p> <p>Select <u>V</u>erbose for a more detailed progress report.</p> <p>Following is a complete list of acronyms.</p> <p>DAT Informational messages that are helpful in debugging.</p> <p>ERR Error message.</p> <p>FTL Fatal error message.</p> <p>INF Informational message (no error occurred).</p> <p>TRV Trivial error message.</p> <p>WRN Warning error message.</p>

Note: If a backup is split across more than one media ID, the Progress lists all the media. NetBackup uses only what it needs to restore the requested files, folders, or registry keys.

Search Backups Dialog Box



Access this dialog box:

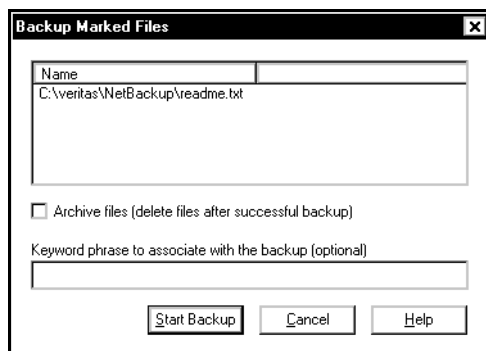
- From the NetBackup Restore window toolbar, select Search Backups
- From the Restore menu, select Search Backups...

Use this dialog box to narrow the backup history search parameters for your restore.

Search Folder:	<p>Shows the folder or registry key for which you are searching. The initial value for the Search Folder is ":". If you select a folder in the NetBackup Restore window, that folder becomes the new default.</p> <p>To change the path, enter a new value and press Return.</p> <p>If you enter a full path name, NetBackup will search for the specific path and file in the selected backup images. Or you can enter only the filename (<code>csb.tmp</code> or <code>*.tmp</code>) and NetBackup will show, in the All Folders pane, the folders where the specified files were found.</p> <p>You can use these wildcard characters:</p> <p>*</p> <p>?</p> <p>Helpful Hint:</p> <p>Before initiating a search, collapse the tree in the All Folders pane as much as possible. NetBackup will expand the tree to the folders that match your search criteria.</p>
Perform Case Insensitive Search	<p>Select Perform Case Insensitive Search to perform case insensitive searches.</p> <p>The search path is case sensitive and must match what is in the database on the NetBackup server. When the Perform Case Insensitive Search checkbox is selected, NetBackup can start a case insensitive search. By default the checkbox is not checked.</p>
Keyword Phrase (Optional):	<p>Enter a keyword phrase associated with a backup image.</p>
Start Date: and End Date:	<p>View and select the Start Date: and the End Date:. The Start Date: and End Date: show the range of backups that NetBackup will search. By default, the start date will be the time of the last full backup and the end date will be the time of the most-recent backup.</p> <p>To change the dates, click in the box and select from the list of available backup images.</p> <p>If you change the Start Date: or End Date:, NetBackup clears all the restore selections that you have previously made.</p>
<u>S</u> earch	<p>Initiates a search for specified files, folders, or registry keys. The NetBackup Restore window will show the folders that match the search criteria.</p>

Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Backup Marked Files Dialog Box

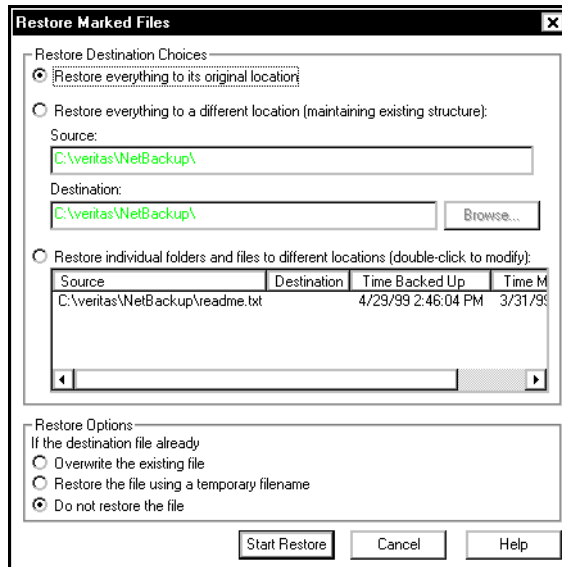


This dialog box appears after you have initiated a backup or archive.

Use this dialog box to view your selections before proceeding with the operation.

List box	Contains a list of objects to be backed up.
Archive Files (Delete Files After Successful Backup)	Select to perform an archive instead of a backup. Files or folders will be deleted after they have been backed up successfully.
Keyword Phrase to Associate With the Backup (Optional)	Specifies a keyword phrase, up to 128 characters in length, that NetBackup will associate with the image created by this backup operation. You can then restore the image by specifying the keyword phrase in the Search Backups dialog box. All printable characters are permitted including space (" ") and period ("."). The default keyword phrase is the null (empty) string.
<u>S</u> tart Backup	Initiates the backup or archive operation.
C <u>a</u> ncel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
H <u>e</u> lp	To view on-line help for this dialog box, click this button.

Restore Marked Files Dialog Box



This dialog box appears after you have initiated a restore operation. Use this dialog box to view your selections before proceeding with the operation. If the list is longer than the list box, a vertical scroll bar appears along the right edge of the pane.

Restore Destination Choices This pane contains radio buttons which determine the destination for restored files. The user must choose one of the radio buttons in the pane.

Restore Everything To Its Original Folder: Restore files, folders, or registry keys to the folder from which they were backed up. This is the default.

Restore Everything To a Different Location (maintaining existing structure): Enter the alternate folder you want to use to restore files, folders, or registry keys.

Source: Enter the path from which the files, folders, or registry keys was backed up.

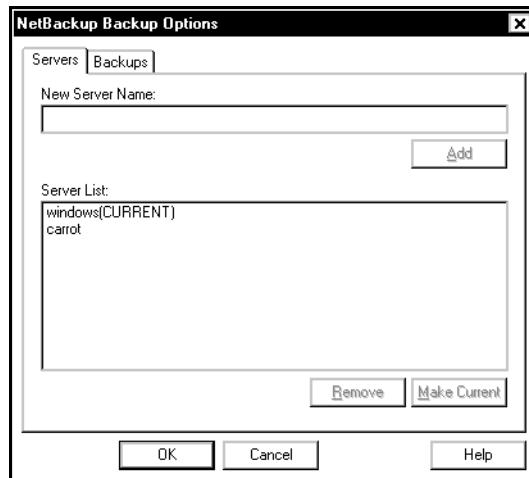
Destination: Enter the path to which the files, folders, or registry keys will be restored

Browse	This button is enabled when the Restore Individual Folders and Files To Different Locations (double-click to modify): checkbox is selected. Click this button to open the Browse for Folder dialog box.
Restore Individual Folders and Files To Different Locations (double-click to modify):	Restore files, folders, or registry keys to an alternate path on a file by file, folder by folder, or registry key by registry key basis. The default is to restore to the original path. Select this option, then double-click on an item in the list, and the Enter New Destination dialog box will pop up on top of the Restore Marked Files dialog box. In the new dialog box, you can either manually enter a new destination path, or press a browse button to browse for a new destination path. If you select OK, that path will then show up in the "Destination" field of the list for that item.
Restore Options	This pane contains radio buttons which specify how to restore files, folders, or registry keys onto a system which may contain files, folders, or registry keys with identical names. The user must choose one of the radio buttons in the pane.
Overwrite Existing Files	Overwrites existing files, folders, or registry keys. The default is to not overwrite. In this mode, the restore does not occur if the files, folders, or registry keys exist. Select Overwrite Existing Files to overwrite existing files, folders, or registry keys.
Restore the File Using a Temporary Filename	NetBackup will rename a file so as not to copy over an existing file. The renaming convention is NBXXXXXX.TMP, where XXXXXX will be something that is generated based on the current date and time to avoid collisions of the restored renamed files. This option is only valid when the restore has been requested by, and performed on, the same machine. This option is not supported by server directed restores.
Do Not Restore the File	This is the default.
Start Restore	Initiates the restore operation.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

NetBackup Backup Options Dialog Box

This dialog box appears when you select Specify NetBackup Machines... from the Backup menu.

Servers Property Sheet



To access this dialog box, open the Backup menu, select Specify NetBackup Machines..., then select the Servers tab to open the property sheet. Use this dialog box to change the current master server.

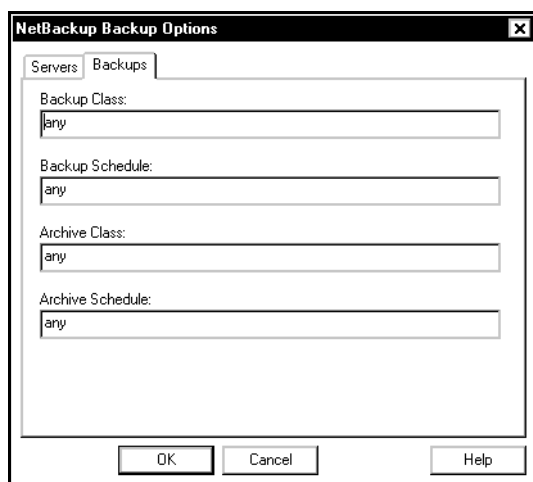
New Server Name: To add another NetBackup server to the Server List:, type the name of the new server in the New Server Name: text box and click Add. The name must be as defined by the system administrator on that server.

If a new server is added to the list from this dialog box, it will appear in the server list for all windows currently opened and any new window that is opened. The new server will be saved in the Server List: box after the current window is closed.

Add Adds the server, entered in the New Server Name: box, to the Server List:.

Server List:	Shows the names of the NetBackup servers that require access to the client. The master server and any slave servers must appear in this list. The master server manages user operations and must be marked as CURRENT. To mark a master server as CURRENT, select a server from the Server List: and click <u>M</u> ake Current. The word CURRENT appears in parentheses beside the name of the new master server.
<u>R</u> emove	Removes a server. First highlight the server in the Server List:, then click <u>R</u> emove.
<u>M</u> ake Current	Designates a master server. First highlight the server in the Server List:, then click <u>M</u> ake Current. Changing the current server will affect only the selected window. This setting will not be saved after the currently selected window is closed.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Backups Property Sheet



To access this dialog box, open the **B**ackup menu, select **S**pecify NetBackup Machines..., then select the **B**ackups tab to open the property sheet. Use this dialog box to select the backup class and the backup schedule for the selected backup window.

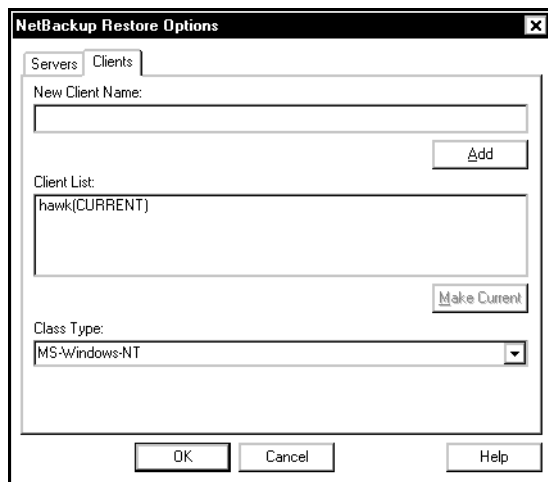
Note: Modifications will only affect the current window.

- | | |
|------------------|---|
| Backup Class: | Specify the class to use for user-directed backups of this client. If you set this value to any (default), NetBackup uses the first class that it finds with both the client name and a user-directed backup schedule. |
| Backup Schedule: | Specify the schedule to use for the user-directed backups for this client. If you set this value to any (default), NetBackup uses the first user-directed backup schedule in the first class that it finds with both the client name and a user-directed backup schedule. |
| Archive Class: | Specify the class to use for user-directed archives of this client. If you set this value to any (default), NetBackup uses the first class that it finds with both the client name and a user-directed archive schedule. |

Archive Schedule:	Specify the user-directed archive schedule to use for user-directed archives of this client. If you set this value to any (default), NetBackup uses the first user-directed archive schedule in the first class that it finds with both the client name and a user-directed archive schedule.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

NetBackup Restore Options Dialog Box

Clients Property Sheet



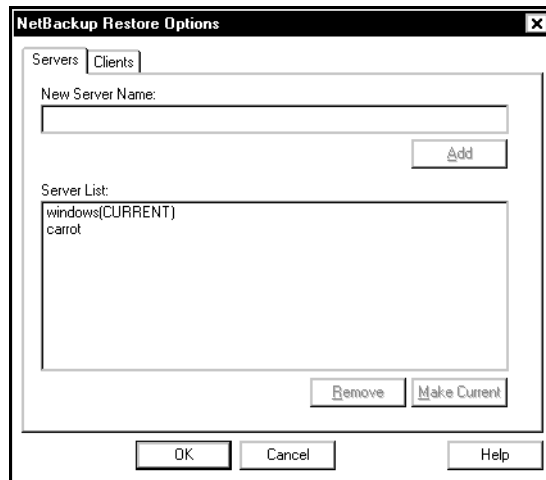
To access this dialog box, open the **Restore** menu, select **Specify NetBackup Machines...**, then select the **Clients** tab to open the property sheet. Use this dialog box to select the remote client whose backups you want to restore to your client.

New Client Name: To add another client name to the Client List:, type the name of the client in the New Client Name: and click **Add**. The client name entered must also be defined in a class on the NetBackup server. If a new client is added to the list it will be in the client list for all windows currently opened and any new window that is opened. The new client will be saved in the Client List: box after the current window is closed.

Add Adds the client, entered in the New Client Name: box, to the Client List:.

Client List:	<p>The Client List: contains the client name for your computer. It can also contain the names of remote NetBackup clients. You can select local or remote NetBackup clients on which to perform NetBackup operations.</p> <p>The NetBackup server administrator must set up the required permissions before you can browse and restore from any remote client.</p> <p>To perform a NetBackup operation on a NetBackup client, select the name from the Client List: and click <u>M</u>ake Current. The word CURRENT appears in parentheses beside the name of the new default client.</p>
<u>M</u> ake Current	<p>Designates the client backup images you can browse for restore operations. First highlight the server in the Client List:, then click <u>M</u>ake Current. Changing the current client will affect only the selected window. This setting will not be saved after the currently selected window is closed.</p>
Class Type:	<p>View and select class type for the client selected in the Client List:. The class type must be the same as specified for the client in the NetBackup configuration on the NetBackup server.</p>
OK	<p>To accept changes to the parameters, click this button.</p>
Cancel	<p>To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.</p>
Help	<p>To view on-line help for this dialog box, click this button.</p>

Servers Property Sheet



To access this dialog box, open the Restore menu, select Specify NetBackup Machines..., then select the Servers tab to open the property sheet. Use this dialog box to change the current master server.

New Server Name: To add another NetBackup server to the Server List:, type the name of the new server in the New Server Name: text box and click Add. The name must be as defined by the system administrator on that server.

If a new server is added to the list from this dialog box, it will appear in the server list for all windows currently opened and any new window that is opened. The new server will be saved in the Server List: box after the current window is closed.

Add Adds the server, entered in the New Server Name: box, to the Server List:.

Server List: Shows the names of the NetBackup servers that require access to the client. The master server and any slave servers must appear in this list. The master server manages user operations and must be marked as CURRENT. To mark a master server as CURRENT, select a server from the Server List: and click Make Current. The word CURRENT appears in parentheses beside the name of the new master server.

<u>R</u> emove	Removes a server. First highlight the server in the Server List:, then click <u>R</u> emove.
<u>M</u> ake Current	Designates a master server. First highlight the server in the Server List:, then click <u>M</u> ake Current. Changing the current server will affect only the selected window. This setting will not be saved after the currently selected window is closed.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

NetBackup Client Job Tracker Dialog Box

NetBackup Client Job Tracker

Job ID

Job Type

Status

Time Started

Time Stopped

Current File Name

Current File Size Bytes

Actual

Files KBytes Data

Folders KBytes Image

KBytes/Sec

Estimated

Files KBytes Data

Folders KBytes Image

OK Previous Next

To open the NetBackup Client Job Tracker dialog right click on the NetBackup Client icon in the system tray and select Details. If Details is disabled, there have not been any backups or restores since the NetBackup Client Job Tracker was started. If the NetBackup Client icon is not in the system tray, see "Start the Browser" on page 8 for information on starting the Job Tracker.

NetBackup Client Job Tracker's purpose is to inform the user that a backup or restore is being done on the client machine. The NetBackup Client Job Tracker gives an estimate of the size of the job. It is not intended to replace the View Status dialog box available through the NetBackup Browser or the Activity Monitor available through the NetBackup Server.

Once the NetBackup Client Job Tracker is started, it reports on server directed operations, scheduled operations, and user operations. When the NetBackup Client Job Tracker is shut down, it "forgets" about the jobs it has been tracking (this includes logging off the system).

Job Tracker only reports on the status of a backup as it is running on the client. Once a backup is sent to the NetBackup Server, it will not update the status of that job. Example: the client sends all of the data to be backed up to the server successfully. It reports the backup status as successful. Later an error occurs on the server which causes the backup to fail, the status shown by the Job Tracker is not updated.

Job ID	Displays the NetBackup Job ID.
Job Type	Shows the type of NetBackup operation for the selected job: backup, archive and restore.
Status	Displays the progress of the selected operation.
Time Started	Displays the time the NetBackup operation started.
Time Stopped	Displays the time the NetBackup operation stopped.
Current File Name	Displays the name of the file currently being backed up, archived, or restored.
Current File Size	Displays the size in bytes of the file currently being backed up, archived, or restored.
Actual	Displays the status of the NetBackup operation.
Files	Displays the number of the files currently backed up, archived, or restored.
Folders	Displays the number of folders backed up. A folder is counted each time a file or sub folder contained in the folder is backed up.
KBytes Data	Displays the amount of data, in kilobytes, currently backed up, archived, or restored. This is rounded to the nearest whole number, so it is possible this number may be 0 if the number of bytes being backed up is less than 500.
KBytes Image	Displays the current size, in kilobytes, of the image backed up or archived.
KBytes/Sec	Displays the rate of the NetBackup operation in kilobytes per second.
Estimated	Displays an estimate of the finished NetBackup operation.
Files	Displays the total number of files to be processed by the NetBackup operation.
Folders	Displays the number of folders being backed up. A folder is counted each time a file or sub folder contained in the folder is backed up.

KBytes Data	Displays the total amount of data, in kilobytes, to be processed by the NetBackup operation. This is rounded to the nearest whole number, so it is possible this number may be 0 if the number of bytes being backed up is less than 500.
Previous	Shows the operating status of the previous NetBackup operation in the queue.
Next	Shows the operating status of the next NetBackup operation in the queue.
OK	Closes the NetBackup Client Job Tracker dialog box.

System Administrator



This section contains information for the NetBackup Administrator.

Free Browse

The Free Browse feature allows users without restore privileges to restore from scheduled backups. In previous versions of NetBackup, when a scheduled backup was performed by a system administrator using a root user id, the client user was not able to restore from that backup. The Free Browse feature allows the user to use a scheduled backup to restore files. The user will be able to restore only those files to which they have write access.

There are three different settings - Use, Deny, and Allow.

- When the client is set to Use, the user will be allowed to browse scheduled backups if the NetBackup server is set to Allow or Use.
- When the client is set to Deny, the user will not be allowed to browse backups no matter how the NetBackup server is configured.
- If the client is set to Allow, the user will be able to browse scheduled backups if the NetBackup server is set to Use.

The NetBackup master server setting is configured using the `bpclient` command.

Note: By default, the NetBackup master server setting is set to Allow.

To set Use:

```
# bpclient <clientname> -free_browse 2
```

To set Deny:

```
# bpclient <clientname> -free_browse 1
```

To set Allow:

```
# bpclient <clientname> -free_browse 0
```

To verify the configuration:

```
# bpclient <clientname> -L
```

The following table displays the different combinations.

NetBackup Client	NetBackup Server	Use 'Free Browse'
Deny	Deny	No
Deny	Allow	No
Deny	Use	No
Allow	Deny	No
Allow	Allow	No
Allow	Use	Yes
Use	Deny	No
Use	Allow	Yes
Use	Use	Yes

The Free Browse feature will only be used when either the NetBackup client or the NetBackup server has been configured to Use it, and neither have been set to Deny it. By default, all users get the Allow privilege.

In order to make use of the feature on the client, two registry keys need to be created using the NT `regedt32.exe` utility.

1. Use the registry editor to create the following two keys.

```
'HKEY_LOCAL_MACHINE\  
  SOFTWARE\  
    VERITAS\  
      NetBackup\  
        CurrentVersion\  
          Security\  
            FreeBrowse\  
              Use'
```

and

```
'HKEY_LOCAL_MACHINE\  
  SOFTWARE\  
    VERITAS\  
      NetBackup\  
        CurrentVersion\  
          Security\  
            FreeBrowse\  
              Deny'.
```

2. Set the user share permissions on each key.
3. Enter a data value for each key with the name of Flag (type = DWORD). Only when a key has a non-zero Flag value will that privilege be turned on. If both of the Flag values are zero, then all users will get the Allow privilege.

For example:

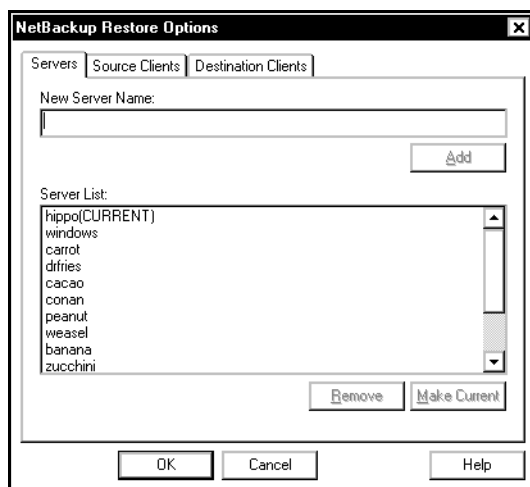
- If USERA has read access to the Deny key and the Flag value is non-zero, then USERA will get the Deny privilege.
- If USERA has read access to the Use key and the Flag value is non-zero, then USERA will get the Use privilege.
- If USERA has read access to both the Use and Deny keys and they both have Flag values of non-zero, then USERA will get the Use privilege.
- If USERA has read access to both the Use and Deny keys and the Use key has a Flag value of zero and the Deny key has a Flag value of non-zero, then USERA will get the Deny privilege.
- If USERA does not have any access to either the Use and Deny keys, then USERA will get the Allow privilege no matter what the values of Flag.

NetBackup Restore Options for System Administrators

When the NetBackup Restore Options dialog box is opened on a NetBackup Browser running on a master or slave server, three property sheets are displayed:

- Servers
- Source Clients
- Destination Clients

Servers Property Sheet



To access this dialog box, open the Restore menu, select Specify NetBackup Machines..., then select the Servers property sheet. Use this dialog box to change the current master server.

New Server Name: To add another NetBackup server to the Server List:, type the name of the new server in the New Server Name: text box and click Add. The name must be as defined by the system administrator on that server.

If a new server is added to the list from this dialog box, it will appear in the server list for all windows currently opened and any new window that is opened. The new server will be saved in the Server List: box after the current window is closed.

Add Adds the server, entered in the New Server Name: box, to the Server List:.

Server List: Shows the names of the NetBackup servers that require access to the client. The master server and any slave servers must appear in this list. The master server manages user operations and must be marked as CURRENT. To mark a master server as CURRENT, select a server from the Server List: and click Make Current. The word CURRENT appears in parentheses beside the name of the new master server.

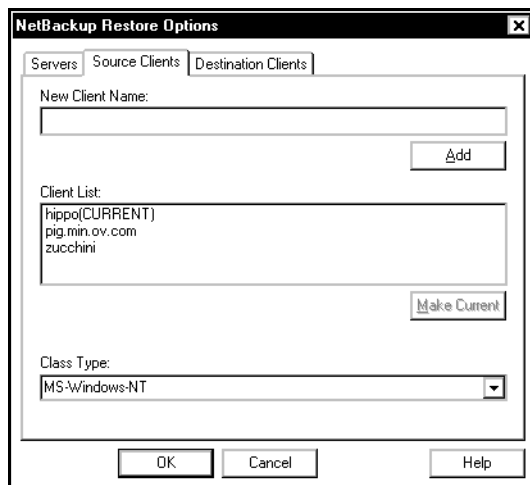
Make Current Designates a master server. First highlight the server in the Server List:, then click Make Current. Changing the current server will affect only the selected window. This setting will not be saved after the currently selected window is closed.

OK To accept changes to the parameters, click this button.

Cancel To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.

Help To view on-line help for this dialog box, click this button.

Source Clients Property Sheet



The screenshot shows the 'NetBackup Restore Options' dialog box with the 'Source Clients' tab selected. It features three tabs: 'Servers', 'Source Clients', and 'Destination Clients'. The 'New Client Name:' field is empty, with an 'Add' button to its right. Below this is the 'Client List' box, which contains the text 'hippo(CURRENT)', 'pig.min.ov.com', and 'zucchini'. A 'Make Current' button is located to the right of the 'Client List'. At the bottom, there is a 'Class Type:' dropdown menu showing 'MS-Windows-NT'. The dialog box has 'OK', 'Cancel', and 'Help' buttons at the bottom.

To access this dialog box, open the Restore menu, select Specify NetBackup Machines..., then select the Clients property sheet. Use this dialog box to select the client whose backups you want to restore.

New Client Name: To add another client name to the Client List:, type the name of the client in the New Client Name: and click Add. The client name entered must also be defined in a class on the NetBackup server. If a new client is added to the list it will be in the client list for all windows currently opened and any new window that is opened. The new client will be saved in the Client List: box after the current window is closed.

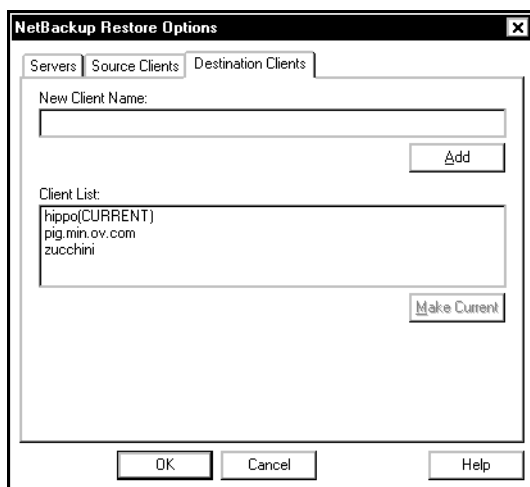
Add Adds the client, entered in the New Client Name: box, to the Client List:.

Client List: The Client List: shows the names of the NetBackup clients that your client can access. To change the name of the client whose backups you can browse for files to restore, select a name from the Client List and click Make Current. The word CURRENT now appears in parentheses beside the name of the new source client.

Class Type: View and select class type for the client selected in the Client List:.. The class type must be the same as specified for the client in the NetBackup configuration on the NetBackup server.

<u>M</u> ake Current	Designates the client backup images you can browse for restore operations. First highlight the server in the Client List:, then click <u>M</u> ake Current. Changing the current client will affect only the selected window. This setting will not be saved after the currently selected window is closed.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Destination Clients Property Sheet



To access this dialog box, open the Restore menu, select Specify NetBackup Machines..., then select the Clients property sheet. Use this dialog box to select the client which will receive the restored backups.

New Client Name: To add another client name to the Client List:, type the name of the client in the New Client Name: and click Add. The client name entered must also be defined in a class on the NetBackup server. If a new client is added to the list it will be in the client list for all windows currently opened and any new window that is opened. The new client will be saved in the Client List: box after the current window is closed.

Add Adds the client, entered in the New Client Name: box, to the Client List:.

Client List: The Client List: shows the names of the NetBackup clients to which you can restore files or folders. To specify a destination client, select a name from the Client List and click Make Current. The word CURRENT will appear in parentheses beside the name of the new destination client.

Class Type: View and select class type for the client selected in the Client List:. The class type must be the same as specified for the client in the NetBackup configuration on the NetBackup server.

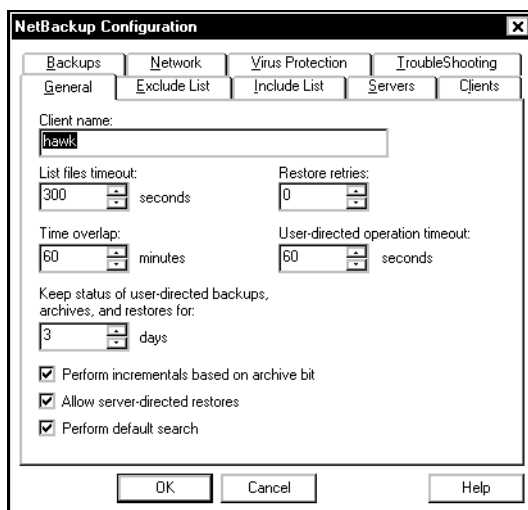
<u>M</u> ake Current	Designates the client that will receive the restore operations. First highlight the server in the Client List:, then click <u>M</u> ake Current. Changing the current client will affect only the selected window. This setting will not be saved after the currently selected window is closed.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

NetBackup Configuration

This section contains information on the NetBackup Configuration dialog box for the system administrator.

Configuration information is kept in the registry key
\\HKEY_LOCAL_MACHINE\\Software\\VERITAS\\NetBackup
\\CurrentVersion\\Config.

General Property Sheet



The image shows the NetBackup Configuration dialog box with the General tab selected. The dialog has a title bar with a close button. Below the title bar are four tabs: Backups, Network, Virus Protection, and TroubleShooting. The General tab is active, showing a sub-tab bar with General, Exclude List, Include List, Servers, and Clients. The General sub-tab contains the following fields and options:

- Client name: hawk
- List files timeout: 300 seconds
- Restore retries: 0
- Time overlap: 60 minutes
- User-directed operation timeout: 60 seconds
- Keep status of user-directed backups, archives, and restores for: 3 days
- ☒ Perform incrementals based on archive bit
- ☒ Allow server-directed restores
- ☒ Perform default search

At the bottom are three buttons: OK, Cancel, and Help.

To access this property sheet:

1. From the Actions menu, select Configure...
2. Click the General property sheet.

Use this property sheet to set any of the configuration parameters for your client.

Client Name:	Specify the name of your client. This name is used when backing up, archiving and restoring files, folders, or registry keys. It must match one in the NetBackup server class configuration.
List Files Timeout (Timeout Period):	This parameter should be changed only by a system administrator. Specify the number of seconds to wait for a response from the NetBackup master server when listing files. If this amount of time is exceeded, the user receives the socket read failed error even if the server is still processing the user's request. The default is 300 seconds. The minimum setting is zero. The maximum setting is 36,000 seconds.
Restore Retries:	This parameter should be changed only by a system administrator. Specify the number of times to retry a restore after a failure. The default is zero, which is no retries. The maximum setting is 999.
Time Overlap:	This parameter should be changed only by a system administrator. Specify the extra number of minutes to add to the date range for incremental backups when using date based backups. This value can be used to compensate for differences in the speed of the clock between the client and NetBackup server. The default is 60 minutes. The minimum setting is zero. The maximum setting is 1,440 minutes.
Keep Status of User-Directed Backups, Archives, and Restores For:	Specify the number of days to store progress reports before the system will automatically delete them. Default is 3 days. The minimum allowable value is zero. The maximum is 9,999

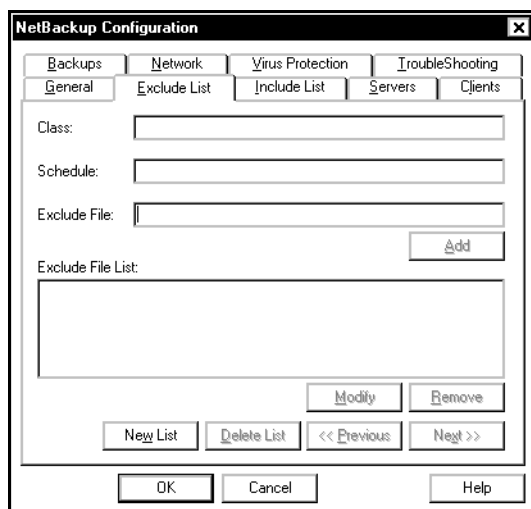
Perform Incrementals	This parameter should be changed only by a system administrator.
Based on Archive Bit:	<p>Select this check box to have NetBackup include files in an incremental backup only if their archive bit is set. The system sets this bit whenever a file is changed and it will remain set until NetBackup clears it. A full backup always clears the archive bit. A differential-incremental backup clears the archive bit if the file is successfully backed up within the number of seconds indicated by <code>Clear_Archive_Bit_Incr_Wait</code>. A cumulative-incremental backup or user backup has no effect on the archive bit.</p> <p>Clear this checkbox to have NetBackup include a file in an incremental backup only if the file's datetime stamp has been changed since the last backup. For a differential-incremental backup, NetBackup compares the file's timestamp against the last full backup. For a cumulative-incremental backup, NetBackup compares the timestamp against the last full backup or incremental backup.</p> <p>If you install or copy files from another computer, the new files retain the datetime stamp of the originals. If the original date is before the last backup date on this computer, then the new files will not be backed up until the next full backup.</p> <p>Windows 95/98 and Windows NT clients use the create and modify datetime stamp.</p>
Allow Server-Directed Restores:	<p>This parameter should be changed only by a system administrator.</p> <p>Select this check box to let the administrator on the NetBackup server initiate restores to this client. The default is to allow server directed restores.</p>
Perform Default Search:	<p>If selected, NetBackup will automatically search the default range of backup images and display the backed up folders and files whenever a restore window is opened.</p> <p>Clear this box to disable the initial search. The NetBackup Restore window will not show any files or folders when initially opened. Clicking a backup image, or selecting a range of backup images, will initiate a search.</p> <p>By default, this box is selected.</p>
OK	To accept changes to the parameters, click this button.



Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
--------	---

Help	To view on-line help for this dialog box, click this button.
------	--

Exclude List Property Sheet



Note: Parameters in this dialog box should be changed only by a system administrator.

To access this property sheet:

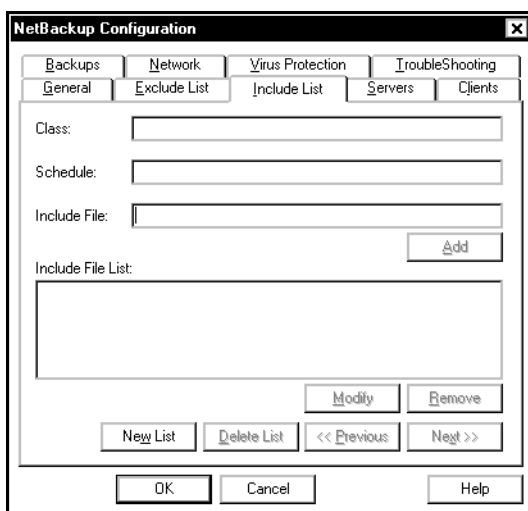
1. From the Actions menu, select Configure...
2. Click the Exclude List property sheet.

Use this property sheet to view and change the list of files to exclude from a master server directed backup. For example, if you add C:*.bat to the Exclude File List:, all files with a .bat extension that appear in the root of the C: drive will not be backed up. If you want to exclude all .bat files, use *.bat. Exclude lists only apply to full backups, cumulative-incremental backups, and differential-incremental backups initiated by the NetBackup server. Refer to "Syntax Rules for Exclude Lists and Include Lists" on page 128 for details.

Exclude lists can be created for specific classes and schedules. The first exclude list has the class and schedule disabled. The list cannot be deleted, but it can be empty.

Class	The Exclude File List: applies only to server directed backups for the specified class.
Schedule:	The Exclude File List: applies only to server directed backups for the specified class. This requires that a class be specified.
Exclude File:	Enter the file or folder, that you want to exclude, in the list box. Click <u>A</u> dd to move the file or folder to the Exclude File List:. The exclude list is case sensitive unless the case_sensitive_exclude_list data value in the registry is set to no.
<u>A</u> dd	Click this button to add a file or folder to the Exclude List File.
Exclude File List:	The file list applies only to scheduled backups. It shows the names of the files that will be excluded in a scheduled backup. To remove a file from the list, select the name and click <u>R</u> emove.
<u>M</u> odify	Select a list entry, then click this button to edit the selected file or folder from the file list.
<u>R</u> emove	Click this button to remove a selected file or folder from the file list.
<u>N</u> ew List	Use this button to create a new list with a class and schedule. Duplicates of class and schedule are not allowed.
<u>D</u> elete List	Use this button to delete the current list.
<< <u>P</u> revious	Use this button to view the previous Resource displayed.
<u>N</u> ext>>	Use this button to change the contents of the Resource text box to show the next Resource in the list.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Include List Property Sheet



Note: Parameters in this dialog box should be changed only by a system administrator.

To access this property sheet:

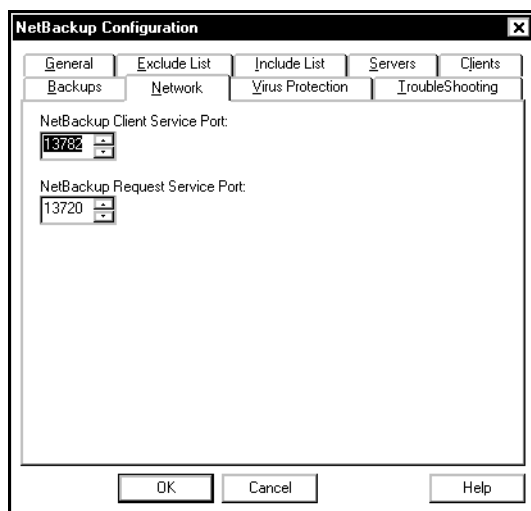
1. From the Actions menu, select Configure...
2. Click the Include List property sheet.

Use this property sheet to view and change the list of files which would otherwise have been excluded during a master server directed backup. For example, if you add *.bat in the Exclude File List:, all files with a .bat extension will not be backed up. However, if you decide you want to backup the autoexec batch file, you would add autoexec.bat to the Include File List:. Include lists only apply to full backups, cumulative-incremental backups, and differential-incremental backups initiated by the NetBackup server. Refer to "Syntax Rules for Exclude Lists and Include Lists" on page 128 for details.

Include lists can be created for specific classes and schedules. The first include list has the class and schedule disabled. The list cannot be deleted, but it can be empty.

Class	The Exclude File List: applies only to server directed backups for the specified class.
Schedule:	The Exclude File List: applies only to server directed backups for the specified class. This requires that a class be specified.
Include File:	Enter the file or folder, that you want to include, in the list box. Click <u>A</u> dd to move the file or folder to the Include List File. The include list is case sensitive unless the case_sensitive_exclude_list data value in the registry is set to no.
<u>A</u> dd	Click this button to add a file or folder to the Exclude List File.
Include File List:	The file list applies only to scheduled backups. It shows the names of the files that are included in a backup or restore operation. To remove a file from the list, select the name and click <u>R</u> emove.
<u>M</u> odify	Select a list entry, then click this button to edit the selected file or folder from the file list.
<u>R</u> emove	Click this button to remove a selected file or folder from the file list.
<u>N</u> ew List	Use this button to create a new list with a class and schedule. Duplicates of class and schedule are not allowed.
<u>D</u> elete List	Use this button to delete the current list.
<< <u>P</u> revious	Use this button to view the previous Resource displayed.
<u>N</u> ext>>	Use this button to change the contents of the Resource text box to show the next Resource in the list.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Network Property Sheet



Note: Parameters in this dialog box should be changed only by a system administrator.

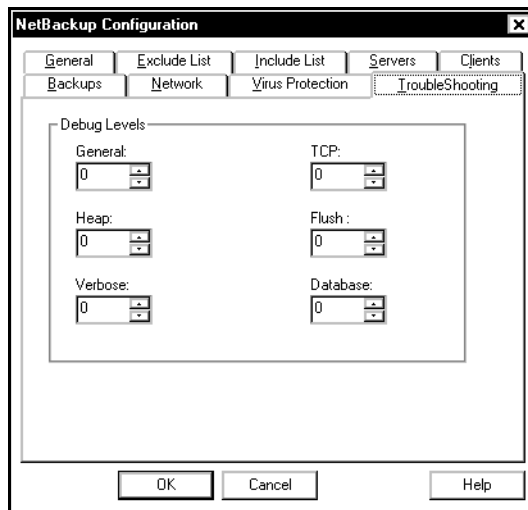
To access this property sheet:

1. From the Actions menu, select Configure...
2. Click the Network property sheet.

Use this property sheet to view and change the port numbers used during communications between your client and the NetBackup master server.

NetBackup Client Service Port:	Specify the port the NetBackup server uses to communicate with the NetBackup client. The default is 13782.
NetBackup Request Service Port:	Specify the port to which the client should send requests to the NetBackup request service, <code>bprd</code> , on the NetBackup server. The default is 13720.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Troubleshooting Property Sheet



Note: Parameters in this dialog box should be changed only by a system administrator.

To access this property sheet:

1. From the Actions menu, select Configure...
2. Click the Troubleshooting property sheet.

Use this property sheet to view and change the amount of information that NetBackup saves in its activity/troubleshooting logs. NetBackup only creates log files if the log folders are created. See "Troubleshooting Logs" on page 127 for more details. Also see the *NetBackup Troubleshooting Guide - UNIX* or the *NetBackup Troubleshooting Guide - Windows NT Server* for information on using these logs.

Note: Troubleshooting logs can consume a lot of disk space. Delete them when they are no longer needed. For more details on the BPCD logs, refer to "Troubleshooting Logs" on page 127.

General:	Controls the amount of information that NetBackup writes to the troubleshooting logs. Supported values are 0, 1, or 2. The higher the level, the more information is written. The default is 0.
TCP:	Used for debug purposes and enables TCP debugging. Supported values are: 0 No extra logging. This is the default. 1 Log basic TCP/IP functions. 2 Log all TCP/IP functions, including all read and write requests. 3 Log contents of each read/write buffer. Setting Debug TCP Level to 2 or 3 can cause the status reports to be very large. It can also slow performance of a backup or restore operation.
Heap:	Controls the amount of information that NetBackup writes to the troubleshooting logs Enables memory heap debugging. Supported values are: 0 No memory heap debugging information. This is the default. 1 Memory heap information at the start and end of program 2 Near memory heap information at the start and end of program. 3 Near and far memory heap information at the start and end of program
Flush:	NetBackup periodically flushes the progress reports on NetBackup operations. This setting specifies the frequency of the flushes or how often the internal buffer gets written to the progress report. The higher the flush level, the more often the buffer is written to the file. Supported values are 0, 1 or 2. The default is 0.
Verbose:	Used for debug purposes, and enables NetBackup to include more information in its logs. Verbose controls the amount of information that the NetBackup NT Server writes to its logs. This parameter is only in effect when the local machine (where the NetBackup client is being run) is also a NetBackup NT server. The values can be 0 to 99. Supported values are: 0 No extra logging. This is the default. 1- 99 Verbose logging. Use the default setting of zero unless advised otherwise by VERITAS Technical Support.

Database:	Controls the amount of information the NetBackup Database Extensions write to their log files. Supported values are 0 through 9. The higher the level, the more information is written. The default is 0.
OK	To accept changes to the parameters, click this button.
Cancel	To cancel and return to the previous display without accepting changes to the parameters in this dialog box, click this button.
Help	To view on-line help for this dialog box, click this button.

Troubleshooting Logs

NetBackup will generate troubleshooting logs only if you create the following folders on your client.

Windows NT

```
C:\
  \VERITAS
    \NetBackup
      \Logs
      \BPBKAR
      \BPCD
      \BPINETD
      \NBWIN
      \TAR
```

Windows 95/98

```
C:\
  \VERITAS
    \NetBackup
      \BPCD
      \NBWIN
```

All log files use the format `yyymmdd.LOG`.

BPBKAR	Log files in this folder contains info about backups, both user and server directed.
BPCD	Log files in this folder have information useful for troubleshooting communications between your NetBackup client and the NetBackup server.
BPINETD	Log files in this folder have information on the NetBackup Client Service operation.
NBWIN	Log files in this folder have information on user operations.
TAR	Log files in this folder contain information about restores, both user and server

Note: If you use Notepad to view the log files, the file will appear as one long line. Wordpad recognizes the line breaks and properly displays the lines.

Syntax Rules for Exclude Lists and Include Lists

Syntax Rules

The following syntax rules apply to exclude lists and include lists.

- Only one pattern per line is allowed.
- The following meta or wildcard characters are recognized:
 - []
 - ?
 - *
- To use the wildcard characters literally (that is, as non wildcard characters), precede them with a backslash (\). For example, assume that the brackets in the following example are not being used as wildcards:

```
\home\abc\fun[ny[name
```

In your exclude list, precede the brackets with a backslash as in

```
\home\abc\fun\[ny\[name
```

to have NetBackup interpret the brackets literally.

Note: Note that a backslash (\) acts as an escape character only when it precedes a wildcard as in the above example. This means that NetBackup normally interprets a backslash literally and it is a legal character to use in pathnames.

- Spaces are considered legal characters. Be careful to omit extra spaces unless they are part of the file name.

For example, if you want to exclude a file named

```
C:\home\testfile (with no extra space character at the end)
```

and your exclude list entry is

```
C:\home\testfile (with an extra space character at the end)
```

NetBackup will not be able to find the file until you delete the extra space from the end of the file name.

- End a file path with \ to exclude only folders with that path name (for example, C:\home\test\). If the pattern does not end in \ (for example, C:\usr\test) NetBackup excludes both files and folders with that path name.
- To exclude all files with a given name, regardless of their folder path, just enter the name without a preceding slash. For example:

test

rather than

C:\test

This is equivalent to prefixing the file pattern with

C:\

C:*\

C:**\

C:***\

and so on.

Example of an Exclude List

If an exclude list has the following entries:

`C:\home\doe\john`

`C:\home\doe\abc\`

`C:\home*\test`

`C:*\temp`

`temp`

the following are excluded from server directed backups:

- The file or folder named `C:\home\doe\john`.
- The folder `C:\home\doe\abc` (because the exclude entry ends with `\`).
- All files or folders named `test` that are two levels below `home`.
- All files or folders named `temp` that are two levels below the root.
- All files or folders named `temp` at any level.

NetBackup Commands

B



This section describes commands specific to the NetBackup product. Execute these commands in an MS-DOS window so you can see the results.

The following are special conventions used in the command descriptions.

- Brackets [] mean that the enclosed command line component is optional.
- A vertical bar (or pipe) symbol | separates optional arguments from which the user can choose. For example, assume that a command has the following format:

command [arg1 | arg2]

Here, the user can choose either arg1 or arg2 (but not both).

- Italics indicate that the information is user supplied. For example, the user supplies *class*, *schedule*, and *filename* in the following command:

bpbackup -c *class* -s *schedule* *filename*

- An ellipsis (...) means that you can repeat the previous parameter. For example, consider the following command:

bpbackup [-S *master_server* [,*master_server*,...]] *filename*

Here, the -S option requires the first master server name. Additional names can be added, separated by commas and followed by a file name as in:

bpbackup -S mars,coyote,shark,minnow memofile.doc

bparchive

NAME

bparchive - archive files to the NetBackup server

SYNOPSIS

```
install_path\NetBackup\bin\bparchive [-c class] [-s schedule] [-S  
    master_server [master_server,...]] [-t class_type] [-L progress_log] [-  
    w [hh:mm:ss]] [-help] [-k "keyword_phrase"] -f listfile |  
    filenames
```

DESCRIPTION

bparchive processes files that you list on the command line or in the file you specify with the -f *listfile* option. Any file path entered can be a file or directory name. If the list of files includes a directory, bparchive archives all files and subdirectories of that directory starting at the directory itself.

By default, you are returned to the system prompt after bparchive is successfully submitted. The command works in the background and does not return completion status directly to you. The -w option lets you change this behavior so bparchive works in the foreground and returns completion status after a specified time period.

bparchive writes its informative and error messages to a progress-log file. You must create this file prior to the execution of the bparchive command and then specify it with the -L *progress_log* option. If bparchive cannot archive any of the requested files or directories, you can use the progress log to determine the reason for the failure.

If you create an *install_path*\NetBackup\logs\bparchive\ directory with write access, bparchive creates an activity log file in this directory that you can use for troubleshooting.

The following restrictions apply to this command:

- To archive files with the bparchive command, you must have permission to delete the file and the file must not be read-only. Otherwise, NetBackup saves the files but does not delete them from the disk.
- bparchive does not archive the "." or ".." directory entries, and does not archive disk-image backups.

OPTIONS

- c *class*** Names the class to use for the user archive. If it is not specified, the NetBackup server uses the first class it finds that includes the client and a user archive schedule.
- s *schedule***
Names the schedule to use for the user archive. If it is not specified, the NetBackup server uses the first user archive schedule it finds in the class it is using (see the **-c** option).
- S *master_server* [*master_server*,...]**
Specifies the name of the NetBackup master server. The default is the server designated as current on the Server tab of the NetBackup Configuration dialog box. To display this dialog box, start the user interface on the client and click Configure on the Actions menu.
- t *class_type***
Specifies the class type as follows:
- 0 = Standard
 - 3 = Apollo-wbak
 - 4 = Oracle
 - 6 = Informix-On-BAR
 - 7 = Sybase
 - 10 = NetWare
 - 11 = DataTools-SQL-BackTrack
 - 12 = Auspex-FastBackup
 - 13 = MS-Windows-NT
 - 14 = OS/2
 - 15 = MS-SQL-Server
 - 16 = MS-Exchange-Server
 - 17 = SAP
 - 18 = DB2

19 = NDMP

20 = FlashBackup

21 = Split-Mirror

22 = AFS

The default is 3 on Apollos and 0 (Standard) on other clients.

-L *progress_log*

Specifies the name of an existing file in which to write progress information.

For example: `c:\proglog`.

The default is to not use a progress log.

-w [*hh:mm:ss*]

Causes NetBackup to wait for a completion status from the server before returning you to the system prompt.

You can optionally specify a wait time in hours, minutes, and seconds. The maximum wait time you can specify is 23:59:59. If the wait time expires before the archive is complete, the command exits with a timeout status. The archive, however, still completes on the server.

If you use **-w** without specifying the wait time or if you specify a value of 0, NetBackup waits indefinitely for the completion status.

-help

Displays a synopsis of command usage when it is the only option on the command line.

-k *keyword_phrase*

Specifies a keyword phrase that NetBackup associates with the image created by this archive operation. You can then restore the image by specifying the keyword phrase with the **-k** option on the `bprestore` command.

The keyword phrase is a textual description of the archive that is a maximum of 128 characters in length. All printable characters are permitted including space (" ") and period ("."). Enclose the phrase in double quotes ("...") or single quotes ('...').

The default keyword phrase is the null (empty) string.

-f *listfile* Specifies a file (*listfile*) containing a list of files to be archived and can be used instead of the *filenames* option. In *listfile*, place each file path on a separate line.

The format required for the file list depends on whether the files have spaces or returns in the names.

To archive files that do not have spaces or returns in the names, use this format:

filepath

Where *filepath* is the path to the file you are archiving. For example:

```
c:\Programs
```

```
c:\winnt
```

```
c:\documents\old_memos
```

To archive files that have spaces or returns in the names, use this format:

filepathlen filepath

Where *filepath* is the path to the file you are archiving and *filepathlen* is the number of characters in the file path.

For example:

```
11 c:\Programs
```

```
8 c:\winnt
```

```
22 c:\documents\old memos
```

filenames

Names one or more files to be archived and can be used instead of the **-f** option.

Any files that you specify must be listed at the end, after all other options.

EXAMPLES

Example 1

To archive a single file, enter:

```
bparchive c:\usr\user1\file1
```

Example 2

To archive files listed in a file named `archive_list`, enter:

```
bparchive -f archive_list
```

Example 3

To associate the keyword phrase "Archive My Home Directory 01/01/97" to the archive of the directory `c:\home\kwc` and use a progress log named `c:\home\kwc\arch.log` enter the following (all on one line):

```
bparchive -k "Archive My Home Directory 01/01/97" -L  
c:\home\kwc\arch.log c:\home\kwc
```

FILES

install_path\NetBackup\logs\bparchive*.log

bpbackup

NAME

bpbackup - back up files to the NetBackup server

SYNOPSIS

```
install_path\NetBackup\bin\bpbackup [-c class] [-s schedule] [-S  
    master_server [,master_server,...]] [-t class_type] [-L progress_log] [-  
    w [hh:mm:ss]] [-help] [-k "keyword_phrase" ] -f listfile |  
    filenames
```

```
install_path\NetBackup\bin\bpbackup -i [-c class] [-h hostname] [-s  
    schedule] [-S master_server [,master_server,...]] [-t class_type] [-w  
    [hh:mm:ss]] [-k "keyword_phrase" ]
```

DESCRIPTION

bpbackup starts either of the following:

- A user backup that is the equivalent to what is performed by using the interface on the client (see the first form of the command shown above). This type of backup can be started from any NetBackup client in order to back up files from that client.

The bpbackup command processes the files that you list on the command line or in the file that you specify with the -f *listfile* option. A file path can be a file or directory name. If the named files include a directory, bpbackup backs up all files and subdirectories of that directory starting at the directory itself.

- An immediate-manual backup of a client (see the second form of the command shown above). This variation requires the -i option on the bpbackup command and is available only to the administrator on the master server. It is the equivalent starting a manual backup from the NetBackup administrator's interface. Use the -h option to specify the host.

The following restrictions apply to this command:

- You must be the owner of the file or an administrator to back up a file with bpbackup.
- You can back up files and directories owned by other users if you have the necessary permissions.

- `bpbackup` does not back up the "." or ".." directory entries.

By default, you are returned to the system prompt after `bpbackup` is successfully submitted. The command works in the background and does not return completion status directly to you. The `-w` option lets you change this behavior so the command works in the foreground and returns completion status after a specified time period.

`bpbackup` writes informative and error messages to a progress-log file if you create the file prior to the execution of the `bpbackup` command and then specify the file with the `-L progress_log` option. If `bpbackup` cannot back up the requested files or directories, use the progress log to determine the reason for the failure.

If you create a directory named `install_path\NetBackup\logs\bpbackup` with write access, `bpbackup` creates an activity log file in this directory that can be used for troubleshooting.

OPTIONS

`-c class` Names the class to use for the backup.

If this option is not specified, the action depends on the type of backup as follows:

For a user backup, NetBackup uses the first class it finds that includes the client and a user backup schedule.

For an immediate-manual backup (`-i` option), NetBackup attempts to back up the specified files in all classes.

`-i` Starts an immediate-manual backup. This is the equivalent of starting a manual backup from the NetBackup administrator interface. You must be the administrator on a NetBackup server to use the `-i` option.

`-h hostname`

Use this option only in conjunction with the `-i` option. It names the client host on which to run the backup. If it is not specified, NetBackup runs the backup on all clients in the class.

`-s schedule`

Names the schedule to use for the backup. If it is not specified, the NetBackup server uses the first user backup schedule it finds for the client in the class it is using (see the `-c` option).

`-S master_server [,master_server,...]`

Specifies the name(s) of the NetBackup master server(s). The default is the server designated as current on the Servers tab of the NetBackup Configuration dialog box. To display this dialog box, start the user interface on the client and click Configure on the Actions menu.

`-t class_type`

Specifies the class type as follows:

0 = Standard

3 = Apollo-wbak

4 = Oracle

6 = Informix-On-BAR

7 = Sybase

10 = NetWare

11 = DataTools-SQL-BackTrack

12 = Auspex-FastBackup

13 = MS-Windows-NT

14 = OS/2

15 = MS-SQL-Server

16 = MS-Exchange-Server

17 = SAP

18 = DB2

19 = NDMP

20 = FlashBackup

21 = Split-Mirror

22 = AFS

The default is 3 on Apollos and 0 (Standard) on other clients.

-L *progress_log*

Specifies the name of an existing file in which to write progress information.

For example: `c:\proglog`

The default is to not use a progress log.

-w [*hh:mm:ss*]

Causes NetBackup to wait for a completion status from the server before returning you to the system prompt.

You can optionally specify a wait time in hours, minutes, and seconds. The maximum wait time you can specify is 23:59:59. If the wait time expires before the backup is complete, the command exits with a timeout status. The backup, however, still completes on the server.

If you use `-w` without specifying a wait time or if you specify a value of 0, NetBackup waits indefinitely for the completion status.

-help

Displays a synopsis of command usage when it is the only option on the command line.

-k *keyword_phrase*

Specifies a keyword phrase that NetBackup associates with the image being created by this backup operation. You can then restore the image by specifying the keyword phrase with the `-k` option on the `bprestore` command.

If you use the `-i` option with `-k`, NetBackup establishes an association between the keyword phrase and the backup class and image.

The keyword phrase is a textual description of the backup that is a maximum of 128 characters in length. All printable characters are permitted including space (" ") and period ("."). Enclose the phrase in double quotes ("...") or single quotes ('...').

The default keyword phrase is the null (empty) string.

-f *listfile*

Specifies a file (*listfile*) containing a list of files to be backed up. This option can be used instead of the *filenames* option, but cannot be used with the *-i* option. List each file on a separate line.

The format required for the file list depends on whether the files have spaces or returns in the names.

To back up files that do not have spaces or returns in the names, use this format:

filepath

Where *filepath* is the path to the file you are backing up. For example:

```
c:\Programs
```

```
c:\winnt
```

```
c:\documents\old_memos
```

To back up files that have spaces or returns in the names, use this format:

filepathlen filepath

Where *filepath* is the path to the file you are backing up and *filepathlen* is the number of characters in the file path.

For example:

```
11 c:\Programs
```

```
8 c:\winnt
```

```
22 c:\documents\old memos
```

filenames

Names one or more files to be backed up. This option can be used instead of the *-f* option, but cannot be used with the *-i* option. Any files that you specify must be listed at the end, following all other options.

EXAMPLES

Example 1

To perform a user backup of a single file, enter:

```
bpbackup c:\users\user1\file1
```

Example 2

The following command starts a user backup of the files that are listed in a file named `backup_list`.

```
bpbackup -f backup_list
```

Example 3

The following command (all on one line) starts an immediate-manual backup of the client host named `diablo`, in the class named `cis_co`. The class type is Standard class and is in the configuration on the master server named `hoss`. The progress log is `c:\home\hrp\prog`.

```
bpbackup -C cis_co -i -h diablo -S hoss -t 0 -L  
c:\home\hrp\prog
```

Example 4

The following command (all on one line) associates the keyword phrase "Backup My Home Directory 01/01/97" to the user backup of the directory `c:\home\kwc`. The progress log is `c:\home\kwc\bkup.log`.

```
bpbackup -k "Backup My Home Directory 01/01/97" -L  
c:\home\kwc\bkup.log c:\home\kwc
```

Example 5

The following command (all on one line) associates the keyword phrase "Class Win NT 01/01/97" to the immediate-manual backup of the client host named `slater` in the `ms-windows-nt` type class named `win_nt_class`. The progress log is `c:\tmp\bkup.log`.

```
bpbackup -k "Class Win NT 01/01/97" -i -h slater -c  
win_nt_class -t 13 -L c:\tmp\bkup.log
```

FILES

install_path\NetBackup\logs\bpbackup*.log

bplist

NAME

bplist - lists backed up and archived files on the NetBackup server

SYNOPSIS

```
install_path\NetBackup\bin\bplist [-A | -B] [-C client] [-S  
    master_server] [-t class_type] [-k class] [-F] [-R [n]] [-b | -c |  
    -u] [-l] [-r] [-T] [-unix_files] [-nt_files] [-s mm/dd/yy  
    [hh:mm:ss]] [-e mm/dd/yy [hh:mm:ss]] [I] [PI] [-help] [-keyword  
    "keyword_phrase"] [filename]
```

DESCRIPTION

bplist shows a list of previously archived or backed up files according to the options that you specify. You can choose the file or directory and the time period that you want the listing to cover. Directories can be recursively displayed to a specified depth.

The list shows only the files that you have read access to. You also must own or have read access to all directories in the file paths. You can list files that were backed up or archived by another client only if you are validated to do so by the NetBackup administrator.

If you create directory *install_path*\NetBackup\logs\bplist\ with write access, bplist creates an activity log file in this directory that you can use for troubleshooting.

The output of bplist goes to standard output.

OPTIONS

- A | -B Specifies whether to produce the listing from archives (-A) or backups (-B). The default is -B.
- C *client* Specifies a client name to use for finding backups or archives to list. This name must be as it appears in the NetBackup configuration. The default is the current client name.
- S *master_server*

Specifies the name of the NetBackup server. The default is the server designated as current on the Server tab of the NetBackup Configuration dialog box. To display this dialog box, start the user interface on the client and click Configure on the Actions menu.

-t *class_type*

Specifies the class type as follows:

0 = Standard

3 = Apollo-wbak

4 = Oracle

6 = Informix-On-BAR

7 = Sybase

10 = NetWare

11 = DataTools-SQL-BackTrack

12 = Auspex-FastBackup

13 = MS-Windows-NT

14 = OS/2

15 = MS-SQL-Server

16 = MS-Exchange-Server

17 = SAP

18 = DB2

19 = NDMP

20 = FlashBackup

21 = Split-Mirror

20 = AFS

The default is 3 (Apollo) on Apollos and 0 (Standard) on other clients.

- `-k class` Names the class to search to produce the list. If not specified, all classes are searched.
- `-R [n]` Recursively lists subdirectories encountered to a depth of *n*. The default for *n* is 999.
- `-b | -c | -u`
Specifies an alternate date and time to be used for printing with the `-l` option:
 - `-b` displays the backup date and time of each file.
 - `-c` displays the last modification date and time for each file.
 - `-u` displays the last access date and time of each file.The default is to display the time of last modification of each file.
- `-l` Shows file details.
- `-r` Lists disk images that were backed up. The default is to list file systems.
- `-T` Lists directories in true-image backups. The default is to list non-true-image backups.
- `-unix_files`
Lists the files and directories in UNIX format. For example:
`/C/users/test`.
- `-nt_files`
Lists the files and directories in Windows NT format. For example:
`C:\users\test`.
- `-s mm/dd/yy [hh:mm:ss]`
- `-e mm/dd/yy [hh:mm:ss]`
Specifies the start and end date range for the listing.
 - `-s` specifies a start date and time for the listing. The resulting list shows only files in backups or archives that occurred at or after the specified date and time. Use the following format for the start date and time:

`mm/dd/yy [hh[:mm[:ss]]]`

The valid range of dates are from 01/01/70 00:00:00 to 01/19/2038 03:14:07. The default is 01/01/70 00:00:00.

-e specifies an end date and time for the listing. The resulting list shows only files from backups or archives that occurred at or before the specified date and time. Use the same format as explained above for start date and time. The default is the current date and time.

-I Specifies a case-insensitive search. This means that capitalization is not considered when comparing names (for example, Cat matches cat).

-PI Specifies a path-independent search, which means that NetBackup searches for a specified file or directory without regard to the path. For example, if a file named `test` exists in the three directories shown below, a search for `test` finds all three instances of the file:

```
/tmp/junk/test  
  
/abc/123/xxx/test  
  
/abc/123/xxx/yyy/zzz/test
```

-help Displays a synopsis of command usage when it is the only option on the command line.

-keyword "*keyword_phrase*"

Specifies a keyword phrase for NetBackup to use when searching for backups or archives from which to restore files. The phrase must match the one that was previously associated with the backup or archive by the -k option of the `bpbackup` or `bparchive` command.

You can use this option in place of or in combination with the other restore options in order to make it easier to restore your backups and archives. The following meta characters can be used to simplify the task of matching keywords or parts of keywords in the phrase:

* matches any string of characters.

? matches any single character.

[] matches one of the sequence of characters specified within the brackets.

[-] matches one of the range of characters separated by the "-".

The keyword phrase can be up to 128 characters in length. All printable characters are permitted including space (" ") and period ("."). The phrase must be enclosed in double quotes ("...") or single quotes ('...').

The default keyword phrase is the null (empty) string.

filename Names the file or directory to list. If you do not specify a path, the default is the current working directory.

Any files that you specify must be listed at the end, following all other options.

Use upper case for the drive letter. For example,
C:\NetBackup\log1.

EXAMPLES

Example 1

To list recursively, in long format, the files that were backed up in

D:\WS_FTP.LOG.

```
bplist -l D:\WS_FTP.LOG
-rwx----- bjm      bjm      64 Oct 10 1997 D:\WS_FTP.LOG
-rwx----- bjm      bjm      64 Oct 10 1997 D:\WS_FTP.LOG
-rwx----- bjm      bjm      64 Oct 10 1997 D:\WS_FTP.LOG
```

Example 2

To list, with details, the files that were backed up and associated with all or part of the keyword phrase

"My Home Directory"

in directory C:\home\kwc, enter the following:

```
bplist -keyword "*My Home Directory*" -l C:\home\kwc
```

Example 3

To list, with details, the files that were archived and associated with all or part of the keyword phrase

"My Home Directory"

in directory C:\home\kwc enter the following:

```
bplist -A -keyword "*My Home Directory*" -l C:\home\kwc
```

Example 4

To list, recursively and with details, the files that were backed up on drive D of Windows NT client slater and associated with all or part of the keyword phrase

"Win NT"

enter the following:

```
bplist -keyword "*Win NT*" -C slater -t 13 -R -l D:\
```

FILES

install_path\NetBackup\logs\bplist*.log

bprestore

NAME

bprestore - restores files from the NetBackup server

SYNOPSIS

```
install_path\NetBackup\bin\bprestore [-A | -B] [-K] [-l | -H | -Y]
    [-r] [-T] [-L progress_log] [-R rename_file] [-C client] [-D client] [-
    S master_server] [-t class_type] [-s mm/dd/yy [hh:mm:ss]] [-e
    mm/dd/yy [hh:mm:ss]] [-w [hh:mm:ss]] [-k "keyword_phrase" ] -f
    listfile | filenames
```

DESCRIPTION

bprestore lets users restore a backed up or archived file or list of files. You can also name directories to restore. If you include a directory name, bprestore restores all files and subdirectories of that directory.

By default, you are returned to the system prompt after bprestore is successfully submitted. The command works in the background and does not return completion status directly to you. The -w option lets you change this behavior so bprestore works in the foreground and returns completion status after a specified time period.

The bprestore command restores the file from the most recent backups within the time period you specify. bprestore overwrites any file of the same name that already exists on the local client disk, unless you include the -K option. It is also possible to restore files that were backed up or archived on another client (-C option). You must be validated by the NetBackup administrator to restore from other clients.

Use the bplist command to display information on the files and directories that were backed up or archived.

bprestore writes informative and error messages to a progress-log file if you create the file prior to the execution of the bprestore command and then specify the file with the -L *progress_log* option. If bprestore cannot restore the requested files or directories, you can use the progress log to find the reason for the failure.

For detailed troubleshooting information, create a directory named *install_path\NetBackup\logs\bprestore* with write access. *bprestore* then creates an activity log file in this directory.

The following restrictions apply to *bprestore*:

- You can restore files and directories that you own and those owned by other users if you have read access. You need write access to another user's directories and files to restore that user's files to their original location.
- The operating system restricts the number of files and directories that you can specify on a single *bprestore* command line. If this is a problem, use the *-f* option to restore the files.

OPTIONS

- A* | *-B* Specifies whether to restore from archives (*-A*) or backups (*-B*). The default is *-B*.
- K* Specifying this option causes *bprestore* to keep existing files rather than writing over them when restoring files with the same name. The default is to overwrite existing files.

Note: The *-l* | *-H* | *-y* options apply only when restoring UNIX files to a UNIX system.

-l | *-H* | *-y*

Specifying *-l* renames the targets of UNIX links by using the *-R rename_file* option in the same way as when renaming files.

Specifying *-H* renames UNIX hard links by using the *-R rename_file* option in the same way as when renaming files. Soft links are unchanged.

Specifying *-y* renames UNIX soft links by using the *-R rename_file* option in the same way as when renaming files. Hard links are unchanged.

See Example 5 in the EXAMPLES section.

-r Specifying this option restores disk images instead of file systems.

-L progress_log

Specifies the name of an existing file in which to write progress information.

For example: `c:\proglog`

The default is to not use a progress log.

-R *rename_file*

Specifies the name of a file with name changes for alternate-path restores.

For example: `bprestore -F c:\renamef C:\testfile`

Use the following form for entries within the file:

change backup_filepath to restore_filepath

The file paths must start with / (slash) and the first *backup_filepath* that is matched is replaced with the *restore_filepath* string. The default is to restore using the original path.

For example, the following entry renames `C:\users\fred` to `C:\usr\fred2`:

`change /C/users/fred to /C/users/fred2`

-C *client* Specifies a client name to use for finding backups or archives from which to restore files. This name must be as it appears in the NetBackup database. The default is the current client name.

-D *client* Specifies a destination client. This can be done by an administrator on the master server in order to direct the restored files to a machine other than the client specified with the **-C** option.

-S *master_server*

Specifies the name of the NetBackup server. The default is the server designated as current on the Servers tab of the NetBackup Configuration dialog box. To display this dialog box, start the user interface on the client and click Configure on the Actions menu.

-t *class_type*

Specifies the class type as follows:

0 = Standard

3 = Apollo-wbak
4 = Oracle
6 = Informix-On-BAR
7 = Sybase
10 = NetWare
11 = DataTools-SQL-BackTrack
12 = Auspex-FastBackup
13 = MS-Windows-NT
14 = OS/2
15 = MS-SQL-Server
16 = MS-Exchange-Server
17 = SAP
18 = DB2
19 = NDMP
20 = FlashBackup
21 = Split-Mirror
20 = AFS

The default is 3 on Apollos and 0 (Standard) on other clients.

`-s mm/dd/yy [hh:mm:ss]`

`-e mm/dd/yy [hh:mm:ss]`

Specifies the start and end date range for the listing. The `bprestore` command restores only files from backups or archives that occurred within the specified start and end date range.

`-s` specifies a start date and time for the restore window. `bprestore` restores files only from backups or archives that occurred at or after the specified date and time. Use the following format:

mm/dd/yy [hh[:mm[:ss]]]

The valid range of dates are from 01/01/70 00:00:00 to 01/19/2038 03:14:07. The default start date is 01/01/70 00:00:00.

-e specifies an end date and time for the restore window.

bprestore restores only files in backups or archives that occurred at or before the specified date and time. Use the same format as for the start date and time.

The end backup date and time do not need to be exact. The bprestore command restores the file that has the specified backup date and time or the file that is the most recent backup preceding the end date and time. The default is the current date and time.

If you do not specify either -s or -e, bprestore restores the most recently backed up version of the file.

-T Specifies a true-image restore, where only files and directories that existed in the last true-image backup are restored. This option is useful only if true-image backups were performed. If this option is not specified, all files and directories meeting the specified criteria are restored, even if they were deleted.

-w [*hh:mm:ss*]

Causes NetBackup to wait for a completion status from the server before returning you to the system prompt.

You can optionally specify a wait time in hours, minutes, and seconds. The maximum wait time you can specify is 23:59:59. If the wait time expires before the restore is complete, the command exits with a timeout status. The restore, however, still completes on the server.

Specifying 0 or not specifying a time, means wait indefinitely for the completion status.

-k "*keyword_phrase*"

Specifies a keyword phrase for NetBackup to use when searching for backups or archives from which to restore files. The phrase must match the one that was previously associated with backup or archive by the -k option of the bpbbackup or bpbarchive command.

You can use this option in place of or in combination with the other restore options in order to make it easier to restore your backups and archives. The following meta characters can simplify the task of matching keywords or parts of keywords in the phrase:

* matches any string of characters.

? matches any single character.

[] matches one of the sequence of characters specified within the brackets.

[-] matches one of the range of characters separated by the "-".

The keyword phrase can be up to 128 characters in length. All printable characters are permitted including space (" ") and period ("."). The phrase must be enclosed in double quotes ("...") or single quotes ('...').

The default keyword phrase is the null (empty) string.

-f *listfile*

Specifies a file (*listfile*) containing a list of files to be restored and can be used instead of the *filenames* option. In *listfile*, list each file path on a separate line.

The format required for the file list depends on whether the files have spaces or newlines in the names.

To restore files that do not have spaces or newlines in the names, use this format:

filepath

Where *filepath* is the path to the file that you are restoring. For example:

Note: Use upper case for the drive letter. For example, C:\NetBackup\Log1.

C:\programs

C:\winnt

C:\documents\old_memos

To restore files that have spaces or newlines in the names, use one of the following formats:

filepathlen filepath

filepathlen filepath start_date_time end_date_time

filepathlen filepath -s datetime -e datetime

Where:

filepath is the path to the file you are restoring.

filepathlen is the total number of characters in the file path.

start_date_time and *end_date_time* are the decimal number of seconds since 01/01/70 00:00:00.

datetime is the same as the command line (*mm/dd/yy [hh[:mm[:ss]]]*). The start and end date and time specified on the command line is used unless a line in *listfile* overrides it. The dates may change from line to line.

The following is an example that uses *filepathlen filepath*:

```
11 C:\programs
```

```
8 C:\winnt
```

```
22 C:\documents\old memos
```

filenames Names one or more files to be restored and can be used instead of the *-f* option.

Any files that you specify must be listed at the end, following all other options. You must also specify absolute file paths.

Use upper case for the drive letter. For example,
C:\NetBackup\log1.

EXAMPLES

Example 1

To restore a file from backups of `C:\user1\file1` that were performed between `04/01/93 06:00:00` and `04/10/93 18:00:00`, enter the following (all on one line):

```
bprestore -s 04/01/93 06:00:00 -e 04/10/93 18:00:00  
C:\user1\file1
```

Example 2

To restore files listed in a file named `restore_list` by using the most recent backups, enter the following:

```
bprestore -f c:\restore_list
```

Example 3

To restore the directory `C:\kwc` from the backups or archives that are associated with all or part of the keyword phrase "My Home Directory" and use a progress log named `d:\kwc\bkup.log`, enter the following (all on one line):

```
bprestore -k "My Home Directory*" -L d:\kwc\bkup.log  
C:\kwc
```

Example 4

To restore the `D` drive on the Windows NT client `slater` from the backups or archives that are associated with all or part of the keyword phrase "My Home Dir" and use a progress log named `c:\kwc\bkup.log`, enter the following (all on one line):

```
bprestore -k "My Home Dir*" -C slater -D slater -t 13 -L  
c:\kwc\bkup.log D:\
```

Example 5

Assume you have a rename file named `/home/kwc/rename` on a UNIX client and it contains the following:

```
change /home/kwc/linkback to /home/kwc/linkback_alt
```

To restore the hard link named `/home/kwc/linkback` to alternate path `/home/kwc/linkback_alt` on that client, execute:

```
bprestore -H -R /home/kwc/rename /home/kwc/linkback
```

FILES

install_path\NetBackup\logs\bprestore*.log

Glossary

activity logs

Logs that can be optionally enabled for specific NetBackup programs and processes and then used to investigate problems.

administrator

A user that is granted special privileges to install, configure, and manage the operation of a system, network, or application

alternate-client restore

Restores files to a different client than the one from which they were backed up.

alternate-target restore

On a Novell NetWare server platform running the NetBackup target version of client software, this operation restores files to a different target than the one from which they were backed up.

alternate path restore

Restores files to a different directory than the one from which they were backed up.

archive

A special kind of backup where NetBackup backs up the selected files, and if the backup is successful, deletes the files from the local disk. In this manual, references to backups also apply to the backup portion of archive operations except where otherwise noted.

archive bit

A file-status bit that the Microsoft based operating system sets when it writes a file, thereby indicating that the file has changed.



attributes for a class

Configuration parameters that control the behavior of NetBackup during operations involving this class.

automatic backup

A scheduled backup by the master server.

back up

The act of copying and saving files and folders to storage media

backup

Refers to the process of copying and saving files and directories to storage media. For example, "the backup is complete" This term can also refer to the collection of data that NetBackup saves for a client during a backup or archive. For example, "duplicate the backup" (also see image).

Backup is two words when used as a verb. For example, "back up the file."

bp.ini file

NetBackup initialization file for Novell NetWare target clients.

bprd

NetBackup Request Manager service on Windows NT and NetBackup Request daemon on UNIX.

catalogs

Internal NetBackup or Media Manager databases on a Windows NT NetBackup server. These databases contain information about configuration, status, errors, and the files and directories in the stored backup images.

class

Defines the backup policy for a group of one or more clients that have similar backup requirements.

client

The system with the files to back up, archive, or restore.

compression

The process of compacting data to enable more efficient transmission and storage.

configuration

The parameters that govern the behavior of an application. This term can also refer to the manner in which a network or system is laid out or connected (for example, a network configuration).



cumulative-incremental backup

A backup that is scheduled by the administrator on the master server and backs up all files that have changed since the last successful full backup. All files are backed up if no prior backup has been done.

daemon

A program on a UNIX system that runs in the background and performs some task (for example, starting other programs when they are needed). Daemons are generally referred to as services or processes on Windows NT NetBackup servers and clients.

databases for NetBackup or Media Manager

Internal NetBackup or Media Manager databases. The NetBackup databases contain information about configuration, status, errors, and the files and directories in the stored backup images. The Media Manager On a Windows NT system, these databases are called catalogs.

differential-incremental backup

Scheduled by the administrator on the master server and backs up files that have changed since the last successful full or incremental backup.

directory depth

The number of levels below the current directory level that the NetBackup interfaces show in their directory and file list displays.

directory tree

The hierarchical structure in which files are organized on a disk. Each directory lists the files and directories that are directly below it in the tree. On UNIX, the topmost directory is called the root directory.

disaster recovery

Recovering data from backups after a disk crash or other catastrophe.

disk

Magnetic or optical disk storage media.

encryption

Provides additional security by encrypting backup data on the client. This capability is available only with the NetBackup Encryption option.

exclude list

A list that designates files or directories to exclude from automatic backups.

FlashBackup

A special type of raw-partition backup that is available only with the NetBackup FlashBackup option.



flush level	Controls how often Netbackup clears its log files on a Novell NetWare or Microsoft Windows client platform.
frequency (backup)	How often NetBackup performs scheduled backups. For example, if the frequency is seven days then backups occur once a week.
full backup	Copies to a storage unit all files and directories that are beneath a specified directory.
global attributes	NetBackup configuration attributes that affect all classes.
heap level	A parameter for memory-heap debugging on a Novell NetWare or Windows NetBackup client.
host	A computer that executes application programs.
host name	Name by which a host computer is identified by programs and other computers in the network.
image	The collection of data that NetBackup saves for an individual client during each backup or archive. The image contains all the files, directories, and catalog information associated with the backup or archive.
include list	A list that designates files or directories to add back in from the exclude list.
incremental backup	See "cumulative-incremental backup" and "differential-incremental backup."
jbp	A Java-based interface for performing user backups, archives, and restores.
keyword phrase	A keyword phrase is a textual description of a backup.
load	Copy data to internal memory. For example, load the installation program.



logs	Files where a computer or application records information about its activities.
master server	NetBackup server that provides administration and control for backups and restores of client data.
media	Physical magnetic tapes, optical disks, or magnetic disks where data are stored.
media ID	An identifier that is written on a volume as part of the label.
multiplexing	The process of sending concurrent-multiple backups from one or more clients to a single storage device and interleaving those images onto the media.
NLM	NetWare loadable module.
pathname	The list of directories in the path to a destination directory or file.
PC Clients	Refers to NetBackup clients that have Microsoft Windows (NT, 98, 95), Macintosh, or IBM OS/2 operating systems.
port	A location used for transferring data in or out of a computer.
progress report	Log where NetBackup records events that occur during user operations.
registry	A Microsoft Windows NT, 98, and 95 database that has configuration information about hardware and user accounts.
resource	A Novell NetWare term that refers to a data set on the target. For example, in DOS, resources are drives, directories, and files. Also see "target service."
restore	(verb) The act of restoring selected files and directories from a previous backup or archive and returning them to their original directory locations (or to an alternate directory). (noun) The process of restoring selected files and directories from a previous backup and returning them to their original directory locations (or to an alternate directory).



schedules

Controls when backups can occur in addition to other aspects of the backup, such as: the type of backup (full, incremental) and how long NetBackup retains the image.

slave server

NetBackup servers whose attached storage units provide additional storage. The master server schedules and manages the backup and restore operations.

server directed restore

Using the client interface on the master server to restore files to any client. Only the administrator can perform this operation.

server list

The list of servers that a NetBackup client or server refers to when establishing or verifying connections to NetBackup servers. On a Windows NT server and Microsoft Windows clients, the list is in the NetBackup Configuration dialog box in the user interface on the client (see the NetBackup user's guide for the client). On a UNIX server and UNIX and Macintosh clients, the list is in the `bp.conf` file. On NetWare target and OS/2 clients, the list is in the `bp.ini` file.

session

An instance of NetBackup checking its schedules for backups that are due, adding them to its worklist, and attempting to complete all jobs in the worklist. For user backups and archives, a session usually consists of a single backup or archive.

SMDR

Storage management data requestor, a Novell NetWare program that provides its services transparently to all SMS modules and lets remote and local modules communicate with one another.

SMS

Novell NetWare storage management services.

status code

A numerical code, usually accompanied by a message, that indicates the outcome of an operation.

target

See "target service."



target service

A Novell NetWare service that needs storage management. The SMS views all services (for example, print services, communication services, workstations) as targets.

Target Service Agent

A Target-service agent is a Novell NetWare agent that prepares the target's data for SMS during a backup and for the target during a restore.

timeout period

The period of time that an application has allotted for an event to occur.

TIR

See "true image restore."

true image restore

Restores the contents of a directory to what it was at the time of any scheduled full or incremental backup. Previously deleted files are ignored.

TSA

"Target Service Agent."

user operation

A backup, archive, or restore that is started by a person on a client system.

volume

Removable media that has been assigned a media ID and other attributes so Media Manager can use it.

wildcard characters

A character that can be used to represent other characters in searches.



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